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AEROSOL AGE

THE MAGAZINE OF PRESSURE PACKAGING

IN THIS ISSUE

Rexall's Aerosol Line

Aerosols in Japan II

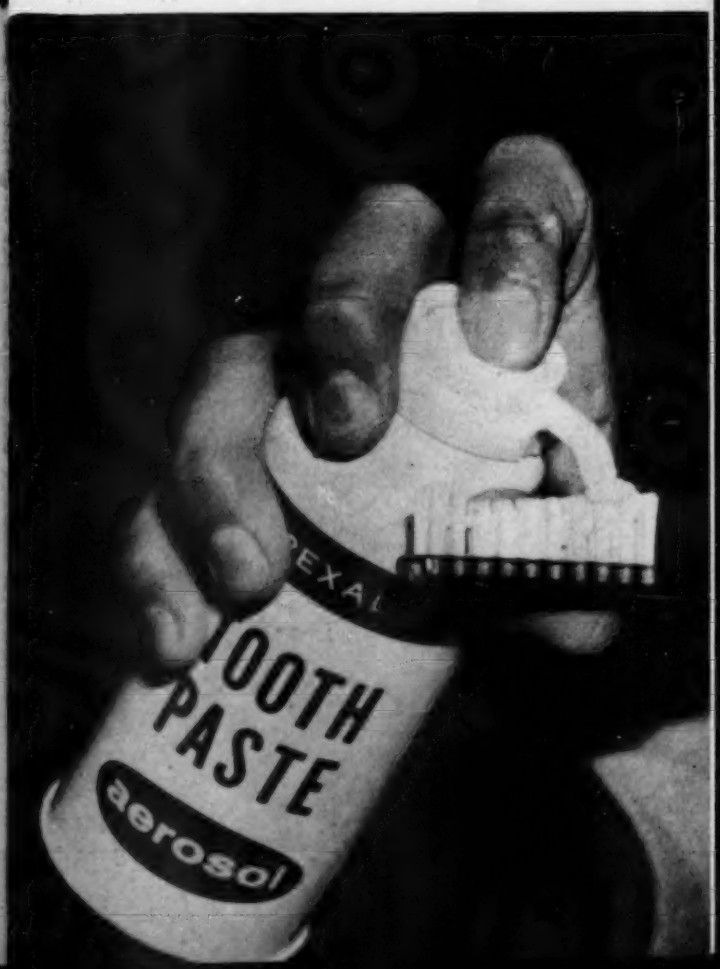
Acrolite Mystery Campaign

Publicity Campaign in High Gear

Lack of Published Data Deplored

Canners, Soap Assn. Meet

February, 1958



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THIS MONTH'S COVER

Rexall and Colgate both began test marketing aerosol toothpaste products in the East just after the first of the year. Rexall's toothpaste is being packaged by Aerosol Techniques, Inc., Bridgeport custom filler, and employs a Precision valve and a nitrogen propellant. (For more on Rexall's aerosol activities, see article beginning on page 14 of this issue.) Procter & Gamble, Bristol-Myers, and The Pepsodent Division of Lever Brothers Co. are also rumored to be doing development work on pressurized toothpastes.

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AEROSOL AGE

The magazine of pressure packaging

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from the

EDITOR'S MAILBAG

To The Editor:

In his article in your December issue, Robert A. Foresman has misinterpreted a number of statements made by me at the Frankfurt meeting in October, and consequently I feel I should set the record straight.

Actually, Mr. Foresman and I are in complete accord on one major point — namely, his statement that "the International Aerosol Association should provide a clearing house for arrangements between essentially continental (or at least area) associations." I made this statement, rather than Mr. Foresman, and repeated it in my address to the Frankfurt meeting. However, little of what Mr. Foresman says subsequently is completely accurate, nor is it supported by the official minutes of the meeting.

It should be pointed out here that for over a decade (as a member of the Foreign Service of the U. S.) I have worked to promote closer coordination and friendship among the European nations. However, Mr. Foresman gives an entirely false impression of my views on a number of important questions.

Since I made my opening statement in German, and Mr. Foresman may not be completely at home in the German tongue, I assume it was due to this that he misinterpreted my remarks. Suffice it to say that I fully endorse the European Common Market and applaud the active steps being taken toward Franco-German cooperation. Not by the wildest stretch of the imagination could anything I said at the Frankfurt meeting be construed as otherwise. I am of course willing to concede that Mr. Foresman either did not understand my remarks or that a translation of them provided him was faulty.

I should like to stress again the fact that the IAA's only purpose is to achieve a successful organization modelled after the CSMA. Far from "acting in a paternalistic manner," it would simply work as a "clearing house" to enable such traffic as might come its way to be coordinated among the various interested parties and countries.

May I take this opportunity to thank you for your excellent cooperation, which is obviously guided by a sincere desire on your part to help pave the way towards the achievement of such an organization.

Gerald M. Mayer
President
INTERNATIONAL AEROSOL ASSOCIATION

● **Rexall Drug Company—A Major Aerosol Marketer** . . . Some of the many fine products developed over the past few years by a leading drug store retailer are illustrated in a special picture story beginning on page 14.

● **Lack of Aerosol Data Impeding Aerosol Industry in Europe** . . . A serious shortcoming on the Continent, which is causing lack of enthusiasm for the aerosol among European scientists, is discussed in detail by a free lance writer, beginning on page 19.

● **Aerosols in Japan . . II** . . . H. Iosaki reports on a number of up-to-date developments in Japan, including the increasing use of vinyl chloride as a propellant. Photographs and story begin on page 22.

● **Acrolite Unveils New Product in Mystery Campaign** . . . How well does a secret campaign serve to introduce a new product? Acrolite, Inc., a marketer of printing and art products, tries out a new way to unveil an aerosol to the retailer. Story on page 26.

● **CSMA Publicity Campaign Goes into High Gear at Florida Meeting** . . . Television, cheesecake, radio and newspapers are used to attract attention to aerosols by the CSMA's Aerosol Division as the campaign to win a wider segment of the consumer market is stepped up. Story on page 33.

● **Aerosols in Review** . . . Fly Resistance, container decoration, and other subjects are excerpted from other periodicals on page 40.

EDITORIALS

Aerosols and the Economy . . .

IF authoritative business and financial experts are to be believed, this country's economy is already in the midst of a definite recession. Granted, it is an unusual one in that inflationary trends continue to hold prices way up, but it must be admitted by even the rosiest optimist that business in general is noticeably less healthy than it was a year ago.

One needn't even consider such hard-to-pin-down factors as the drop in car-load shipments over last year, slackening automobile production and sales, or rising unemployment figures for certain sections of the country. It seems readily evident, even without these fundamental considerations, that the long upward curve of business, which has continued steadily since the end of World War II, seems to be slackening. At this point it is difficult to judge how long the dip may last, and whether increased defense spending may not immediately pick up the economy, but we would only be fooling ourselves if we pretended that this recession doesn't, at present, really exist.

What must be immediately evident is that the establishment of new businesses, considered in the light of higher equipment prices and more expensive building and personnel costs, is becoming more and more risky. Also, the consumer market is becoming increasingly fickle, and to attempt to tie it too closely to big new construction projects or long-term production targets is becoming more and more of a gamble.

It would be expected that all these "warning" factors might eventually have some effect on aerosol sales. However, to date, the steady upward push of the aerosol sales curve (which has continued its phenomenal rise from 1945 onwards) continues without pause. How long can the picture for the aerosol industry remain so bright?

From where we sit it would appear that aerosol sales will continue their pronounced upward trend for at least two to five years. If they falter at all (through any drop in the consumer's buying power) they will dip only slightly. In fact, the nearest the aerosol industry might come to a recession this year (barring a major slump in the economy) is very likely a slight flattening out of the hitherto almost fantastic growth curve.

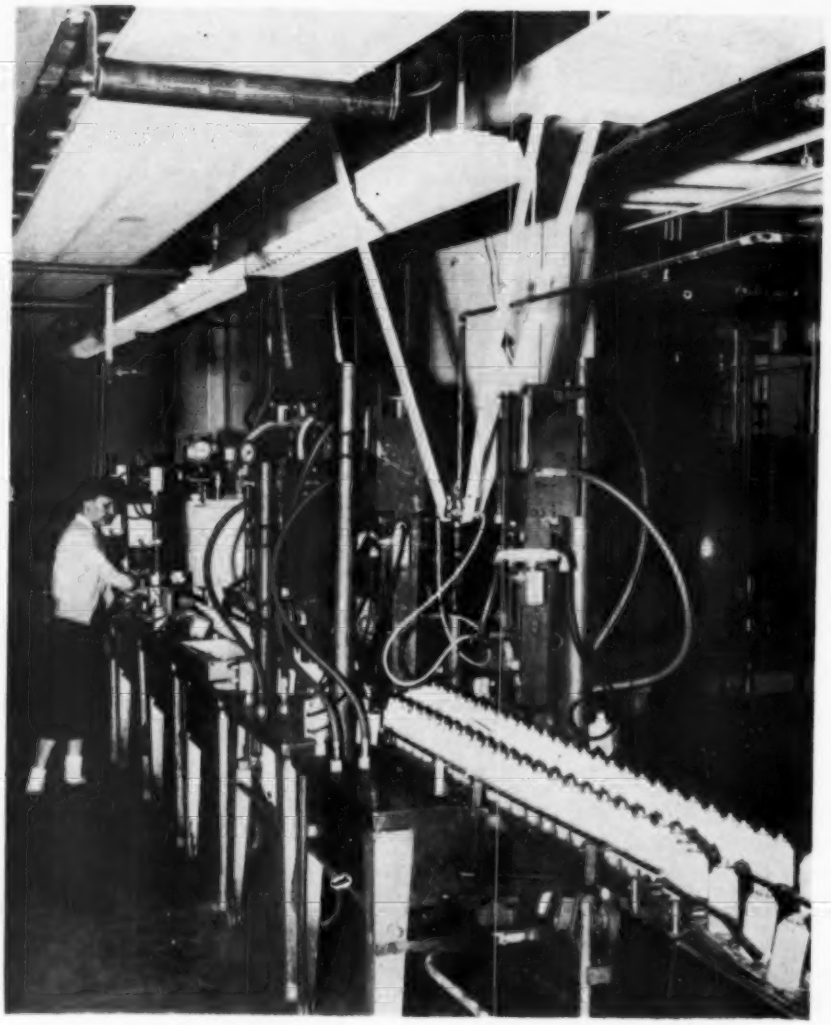
This estimate is based on a number of fairly obvious but valid factors. For one thing, certain aerosol product types (namely, insecticides, hair sprays, and shaving lathers) have grown up out of the "luxury" class. That is, they are being used so extensively by the consumer, (often on a day-to-day basis), and have become so well accepted, that they are becoming thought of as necessities rather than luxuries.

Also, the market has been proved (by survey after survey) to be not nearly saturated. The market potential for aerosol perfumes, pharmaceuticals, paints, personal products, industrial-type products, and many other product types is staggering. It is so enormous, in fact, that any slight recession in the nation's economy will do little to halt what is bound to be a steadily rising sales curve for all these products.

The third major point to be made is that new developments in the aerosol field (nitrogen, food aerosols, new valves, etc.) will have such a profound effect in stimulating the industry in general that by themselves they will override any effects of the current slump in the general business picture. In other words, these new developments alone should still have the effect, in the event of any deepening of the recession, of picking the entire aerosol industry up by the scruff of the neck and thrusting it to new sales heights.

Then too, there are a number of other contri-

(Continued on Page 70)



Rexall's aerosol filling line at its St. Louis plant. The unlabeled containers, in the right foreground, are entering the hot water bath. At the upper left can be seen part of a conveyor system operating on an upper floor.

Rexall Drug Co.

A Major Drug Marketing Company becomes, through an aerosol-oriented management, a leading developer of new and different aerosol products

ONE of the major marketing companies credited with giving aerosols a major push in the consumer market is the Rexall Drug Co., whose central office is in Los Angeles. Along with Revlon, Fuller Brush, Avon, and Helene Curtis, and one or two others, Rexall ranks as a leader among aerosol-oriented marketers. However, Rexall has a decided edge over most other marketers in that it has, as an assured sales outlet, approximately 10,000 Rexall franchised dealers in the U. S.

The striking thing about the Rexall product line is the fact that it contains a good many of the major innovations made in the aerosol field —almost at the same time or before they are announced by the industry. This point is illustrated by the fact that Rexall's perfume line has metered valves and the most advanced container types, and even more strikingly by the fact that Rexall is at present test marketing a nitrogen-powered aerosol toothpaste.

However, the company's prime achievements in the aerosol field have been in development of the ethical drug products, packaged in aerosols. By the time this appears in print Rexall will be on the market with its new "Asthma Mist Meter" and its "Aero-Meter Nasal Spray." Both employ a metered valve, with its obvious advantage of always dispensing the same quantity of medication (a highly important consideration in providing relief from such maladies as asthma, colds, and hay fever). The metered valve also makes it possible to guard against the user either getting too much or too little medication, a possibility in time of stress during an asthmatic attack, for instance.

Rexall's line includes a number of other products in the purely drug classification. Rexall "Burn Spray" is a first aid dressing for burns, and contains a new formulation of antiseptic and anesthetic ingredients to relieve pain while it treats the burn. Rexall "Thru," probably the first aerosol analgesic for relieving muscular aches and pains, also uses a new treatment principle to take medication through the skin into underlying muscular tissue. "Thru," in a more conventional liquid form was introduced in 1956, and since then it has been setting record sales. The aerosol version is expected to follow suit.

Rexall's "Alco-Mist" is another first in the aerosol field—the first pressurized rubbing alcohol on the consumer market. And so it goes. The company is actually so aerosol-minded that the pressurized packaging industry tends to watch it closely for new product types and new technical developments.

On the following pages some of Rexall's many aerosol products are illustrated.

Though yet to package a strictly prescription item in aerosol form (under a Rexall brand name), Riker Laboratories, a subsidiary of Rexall Drug, has had such a product on the market since 1956. Called the "Medihaler" and well known to the aerosol industry as the first such product to be introduced nationally, it can be sold in any drugstore in the country—while the Rexall brand must be sold only in Rexall-franchised stores.

Metered aerosol containers were used for the company's newest fragrance line, which was introduced last Christmas. This line includes "Fair Warning," "Tish Tish" and "Plymouth Garden," and among the items offered are a two-ounce mist cologne using a glass bottle with a plastic coating, and a 10 cc. metal aerosol container.

As is obvious from the pictures on these pages, package design is a major consideration in the Rexall line. The company's staff is so proficient at its calling, in fact, that in the 1957 Packaging Awards Contest of the CSMA's Aerosol Division Rexall completely dominated the field, winning four major prizes. Sharing the top award for all-round best package design was "Stag," which also was the judge's choice as best shaving cream package. "Alco-Mist," in the medicinal and pharmaceutical product categories, and "Adrienne Space Fragrance" a room deodorant also took top prizes.

Package design and development actually didn't receive any real impetus at Rexall Drug until mid-1956, when a new Products Division was set up. To head this new division the company named Ed. L. Ramsey, who was put in charge of developing new techniques for packaging as well as the developing new products within the package.

He came to the job already im-

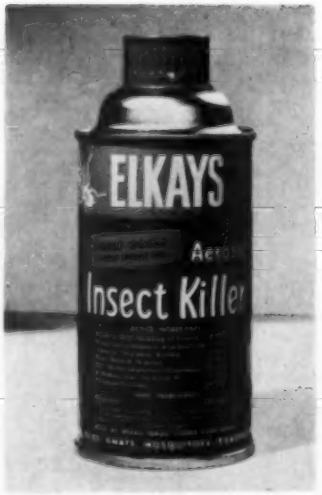
(*Continued on Page* 74)

Rexall's newest product is the "Aero Meter" Nasal Spray. The metered valve can be seen at the botton of the container at right.

Thru is a new penetrating analgesic, one of the first such products on the market. **Stag** is being packaged in a Crown container with a Crown cap. Valve is by Clayton and label by Woodward & Tiernan.

Elkays Air Refresher, in a five-ounce Concan container, has a VCA valve, a West Penn cap, and a label by Woodward & Tiernan.

Fungi Rex is an athlete's foot spray in a four-ounce container. Container is by Crown Can, valve and cap by Precision, and label by Woodward & Tiernan.



Elkays Insect Killer is a 12-ounce Concan container, with a VCA valve, a West Penn cap, and a label by Woodward & Tiernan.

Alco-Mist Body Spray is an alcohol preparation in a seven-ounce American Can container, with valve and cap by Precision. Can is lithographed.

Fair Warning, Plymouth Garden, and **Tish Tish** are three mist colognes in two-ounce Wheaton coated glass bottles. Valves and caps are by Risdon valve.

Plymouth Garden is a perfume in a 10 cc. container by Peerless Tube.

Fair Warning is also in a Peerless container, with a Risdon valve and cap.

Tish Tish has similar equipment to the other two, and like them has a Seri-Print label.

Rexall Lavender Shave Cream in a 12-ounce Crown can container, has Clayton valve and cap. Can is lithographed.

Dainty Mist Deodorant and **Stag Deodorant** are both being packaged in five-ounce Concan containers, and both have Precision valves and Aerosol Research Co. caps. Labels are by Woodward & Tiernan.

Holiday Snow is in a 12-ounce American Can lithographed container, with an Aerosol Research Co. valve and West Penn metal over-cap.

Cara Nome Fast Set, a non-lacquer hair spray, is in a 12-ounce Concan container with label by C. H. Forsman Co. Valve is by Precision and cap by Aerosol Research.

Fungi-Rex, in a newly-designed label, and **Rex Salvine** burn spray both are being packaged in Crown containers with Precision valve and cap. Both labels are by Woodward & Tiernan

Growth of European Aerosol Industry Being Hampered By Lack of Published Aerosol Technical Data

by Erwin O. Genzsch
Hamburg, Germany

UNTIL European scientists and engineers become more universally convinced of the technical effectiveness of aerosol products, they will continue to be hesitant about recommending them more to the public. It is of little use to show these scientists filled aerosol cans or records of sales in certain countries, because they do not question the general practicability or the intrinsic advantages of packaged sprays. It should be pointed out here that the aerosol technique is a new principle (in dispensing and application), whose effectiveness must first be proved in comparison with known and accepted methods. From this point of view, neither commercial nor practical advantages are decisive for the use of the aerosol technique.

In the case of aerosols, dispensing and application require certain standards of particle size, spray patterns, or product quality which may presently be obtained by established methods. Mere possibilities are hardly enough to induce industrial laboratories or production engineers to take up research work on their own without complete technological data on all factors governing the formulation and quality of a given product. But beyond a certain knowledge of principles and standard formulations for household products (which may or may not find a market under prevailing commercial conditions in European and other countries outside the U. S.) there are far too many problems left to experimentation; and, especially, basic scientific research. For this reason, a good many questions asked by the scientists and engineers in Europe are not yet answered — either through a lack of proven data, because such data (if available) is not sufficiently publicized, or because there is a barrier between the exchange of technological data between the practical industrial and the fundamental scientific realms.

The last of these seems to be the most commonly encountered reason in Europe, for there currently seems to be a wide divergence of view between the industrial and scientific languages or points of view. For instance, based on individual experimentation and special developments, a particular aerosol product may be termed "a success" — despite the fact it is the result of a mathematical equation with many unknown facts. The scientist is not happy with this success, because he seeks the fundamental laws that went into the development of the product—asking not only for statistical proof of its effectiveness, but with equal insistence for the principles of *why* the product is effective to such a degree. If there is lack of detailed information (and there often *is* in the aerosol industry) the scientist tends to doubt even the proof of the effectiveness.

IN ADDITION to these basic difficulties, varying points of view may cause the product to be tested or used under the wrong conditions, in a wrong method, and to a wrong purpose. Such misunderstandings seem to be happening more often than not. This is evidenced by the situation in which mechanical aerosol sprays (generally produced by mechanical or electrical apparatus) are usually tested by holding a mirror a short distance from the spray nozzle. Should the mirror remain dry, the spray is judged to be of good quality. However, when pressurized packages are tested by the same method, fluid gas droplets usually moisten the mirror — causing the spray to be put in the "inferior" class.

Further, there is similar risk of error in attempting to judge the aerosol technique solely on the basis of some given product type. For instance, an insecticide may be tested on flies resistant to the product — and both product and technique will immediately be judged a "miss". Most products can be expected to differ in their effectiveness under varying conditions and on different objects. Here a question arises: Does the consumer always get the proper information, instructions, etc. relating to all these eventualities?

There is also the problem of whether the product justifies the added packaging expense, and whether it is really designed to meet the consumer's needs. With commercial household aerosols the filler risks success or failure. But with products of technical or ethical character, some scientific or technical advice will be required from responsible experts. It should be remembered that opinions rendered on these products will be given according to facts and figures supplied by the aerosol industry, and that aerosols will be compared mainly on the performance of other more conventional established products or methods of application.

With aerosol surface products the proof of their effectiveness can be judged rather easily, since the effects can be observed under a microscope. Space sprays present a whole new series of problems; for, since they are active in the dispersed state, their behavior and effectiveness cannot be observed with the usual instruments but must be *deduced*. If their purpose is sanitary, biological, hygienic, or medical, in most cases they will require approval by government authority, certifying to their harmlessness and effectiveness under certain practical conditions. However, scientists in Europe will not readily acknowledge this approval as a positive assurance that the product will work to the strict requirements of the scientific professions. Sooner or later a scientific opinion will be asked by some office, asking about the advisability of purchasing such products in agriculture, hospitals, etc. This is why the publication of full scientific and technological facts on the fundamentals of aerosols is essential for the future large-scale marketing of aerosol products, and why the publication of controlled case histories should be considered as an essential means of sales promotion.

AEROSOL products will be judged according to the effectiveness of (1) the spray and its characteristics, its particle size and proportion of different classes of sizes, shape of particles, etc.; and (2) the active product and its characteristics, chemical composition, etc.

One of the first requirements for the scientist is technological data based on the fundamental principles for producing small particle sizes by means of liquid gases. This includes proof that a certain size range of particles can be called ideal for certain purposes, and that their production and distribution can be successfully effected by the aerosol package. Up to now, too little evidence on this subject has been published in Europe.

Research *has* set up some standards for aerosols in the scientific sense of the word, but, as mentioned previously, scientific test aerosols are usually produced by older mechanical or electrical apparatuses. Different means of producing particle sizes obviously may require different testing methods, and in some cases another contributing factor to consider is differences in product purposes. For instance, this last point is illustrated by room disinfectants (for surfaces of the interior) and air disinfectants (limited to purifying the air and not the surfaces). Also, there may be considerable differences in vapor pressure, viscosity, proportions of volatile components, velocity of particle distribution, etc., between formulations of the same product when they are dispersed by means of apparatus or via the aerosol package. Specific data should be made available showing to what degree these final differences may affect the general efficiency of the complete aerosol package.

The formulation of specific particle sizes seems to be not yet possible by (at least preparatory) chemo-physical calculations. Instead this important characteristic is effected experimentally and individually for each separate product. However, considerable difficulties arise in measuring such particles, especially when the size is smaller than about ten microns (the problem is even more difficult when the particles are under one micron). Products in solutions of liquid gases will reach their final particle size after final vaporization of the gas, though to this time little data has been supplied as to the degree of atomization that is actually reached or on what basis one can reach a given order of particle sizes.

In fact, to date little fundamental information has been published in Europe as to whether it is at all possible to obtain particle sizes under 30 to 20 microns by means of the vaporization effect on liquid gases. This lack of scientific proof is, of course, a source of irritation to scientists and engineers — even more so, perhaps, because they *can* get similar information to a degree of certainty when using conventional equipment to produce aerosols.

ACCORDING to Dr. W. F. Blodgett ("Freon" Products Department, DuPont) the following factors will bring about a reduction of particle size in aerosol packages:

Chemo-physical Factors

Higher gas pressure
Higher concentration of volatile components
Higher vapor pressure of volatile components
Lower viscosity
Lower surface tension of active product particles

Valve Construction

Smaller interior openings
Size and design of expansion chambers
Smaller opening of spray nozzle
Multiple expansion chambers
Higher parting velocity at openings
Higher rate of air intake at spray nozzle

Atmospheric Factors

Higher temperature
Greater turbulence of the air
Lower relative humidity

However, no equations are currently available as to how these different factors react with one another, and how much weight the different factors would have to be given under varying circumstances. Though it seems highly probable that a number of U. S. scientists since Goodhue and Sullivan have developed reliable methods and principles for formulating optimum particle sizes for space products, they seem to be rather unknown (at least in Europe) outside an inner circle of experts currently using them.

Without doubt the design of the valve is of paramount importance in influencing the size of particles and the spray pattern, but again there are not yet sufficient facts concerning the specific effects of the various valve components, their dimensions and design, on the formation of particles. A specified spray pattern and special spray characteristics are still arrived at by experimental selection among many valve types of the same class. However, with mass-produced commercial aerosol products it is doubtful that valve selection would have to be carried out to such pain-

staking standards of particle control as we have been talking about.

In Europe scientists and engineers tend to doubt experimental results of particle size control unless they also have available full information on the fundamentals and principles of particle formation with liquid gases. In Europe also little literature has been published on the process of liquid gas vaporization, thus making it appear doubtful to these scientists whether the process of gasification will *in fact* produce fine particles or even true aerosols. Used to thinking in terms of the conventional methods of producing sprays or aerosols by burning, compressed gases, or mechanical shearing pressure, they *will* understand that the interior pressure in aerosol containers is the prime source of spray production and particle formation (even though it may be believed to be inferior to conventional apparatus because of ineffective testing methods).

Thus it is commonly believed by European scientists that the original U. S. "bug bomb", with its medium or high pressure, was more effective than present-day low pressure packages because of the difference in internal pressure. When briefed on the vaporization effects of liquid gases as the real force of product dispersion, they will ask for full technical details. Therefore, the process of vaporization and the ensuing scattering of gas-product droplets into consecutively smaller particles should be explained and proved far more explicitly than by general reference to the vapor pressures of liquid gases. For instance, what is the relationship between vapor pressure, proportions of gas and product, etc., to particle size? How can it be proved that the expansion of gas droplets in vaporization will result in a proportional dispersion of product particles? Which are the controls of particle size and dispersion? These and more questions need to be answered to a practical degree of reliability. There are not many scientists and engineers in Europe who are familiar with the characteristics of liquid gases and their use in producing aerosols; and, equally important, who are familiar with the use of aerosols for practical purposes. Hence it will be necessary to pave the way with information—*published information.*

Mr. Gensch, a free-lance journalist with articles in a number of leading European trade publications, reports on a major shortcoming in Europe.

THERE seems to be little published knowledge concerning the factors that govern physical contact, either between particles or between different sizes of particles. Because of their higher rate of diffusion, it is generally accepted that smaller particles will more easily come into contact with other particles. On the other hand, it is believed that very small particles of air impurities can be effectively contacted only by similar small particles of active products (since the small particles would fail to come into contact with product particles of much larger dimensions). In other words, odor-causing particles of less than one micron would not easily come into contact with product particles of over 10-20 microns but would require product particles of *less* than five or one microns for quick action. For chemical interactions between contaminating and sanitizing particles, this experimental point of view would (if converted to established fact) be a universal basis for measuring particle sizes of active products.

However, air-sanitizing products packaged as aerosols (and with particle sizes between 30 and 10 microns) have nonetheless proved effective against micro-organisms and other air impurities. In addition to their chemical reaction with these contaminating substances, they are also based on the physical action of fallout after the agglomeration or contact with other particles. To this purpose, product particles should have a size of about 20 microns in order to fall out within a certain time (two to three hours) even without agglomeration, and within a much shorter period according to the weight gained by their attachment to other particles. Their particle size is kept larger than five to ten microns in order to avoid the possibility of their being inhaled.

It is obvious that there is a basic discrepancy of opinion between science, which is demanding very small product particles, and industry, which is producing larger particles. Scientists doubt that the industry will be able to produce smaller particles by means of the aerosol package, and judge that aerosol-packaged products for air sanitation are hence of inferior quality. As a consequence of this understandable difference in viewpoint, much more information and case histories of research data are required in order to convince scientists and sanitation engineers of the quality and true effectiveness of aerosol-packaged products.

According to recent aerosol research (Dr. F. W. Blodgett) the following factors favor the contact of the product to other particles:

Smaller particle size

Greater atmospheric turbulence

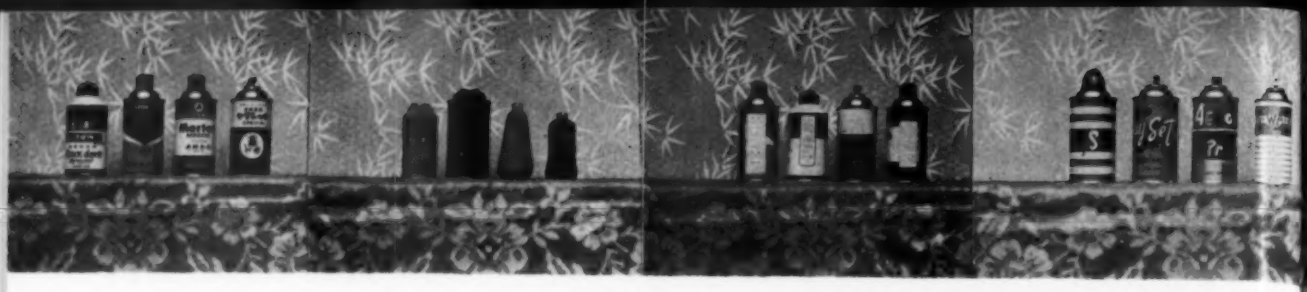
Greater electric charge of particles

Lower vapor pressure of particles

Higher relative air humidity.

Again there seems to be little certainty as to the degree to which these different factors influence the rate of contact, and if different products and substances of impurifying particles also show a different be-

(*Continued on Page* 75)



Aerosols in Japan II...

Vinyl Chloride Finding Increased Use in Japanese Aerosols

A NEW mixture of propellants, with vinyl chloride as the principal ingredient, is undergoing study in Japan. It has been discovered that vinyl chloride, a proper halogen hydrocarbon, will repress the combustibility of oil gas propellants, when mixed with them.

Currently about 70% of aerosol insecticide manufacturers use some type of hydrocarbon propellant, and the remaining 30% of insecticide products produced (which are claimed to be "free from oil gas") nevertheless *do* contain slight amounts. Japanese aerosol cosmetic makers also are using an oil gas propellant (mainly butane).

The high cost of propellant has been one of the chief headaches to Japanese manufacturers. Very shortly there may be a lessening of this problem when the Nitto Chemical Co., Ltd., Tokyo, begins its production of about 30 tons of fluorinated hydrocarbons per month. Until the recent termination of the principal patent, the supply of fluorinated hydrocarbons was the monopoly of DuPont; but now the added competition is expected to drive the price down.

This propellant cost factor is even more important in Japan than in the United States, since the average personal income in Japan is so much lower. Since the propellant price has been the major cost determinant in the Japanese industry, this new source for fluorinated hydrocarbons and the current research with vinyl chloride can be of real importance.

By H. Iosaki
Aerosol Chemical Research Co.
Kobe, Japan

In a comparison of vinyl chloride propellant with butane, the following conclusions were reached:

(1) Vinyl chloride's explosive effect is minimal, and its rate of safety double that of 1.86% butane or 1.4% gasoline.
(2) It has considerably less toxicity than methyl chloride.
(3) Its ignition point is 612°C. This is lower than the set degree of 650°C., but guarantees safety better than that of butane (430°C.) or CH_3OH (400°).
(4) Vinyl chloride is free from offensive odor.
(5) It can be turned out in quantity at low cost by Japanese industry.
(6) Steam pressure at 20°C. shows 3.3 air pressure, a figure similar to iso-butane's 3.0 air pressure.

In another aerosol propellant development in Japan, Takeda Yakuhin K.K., known as the largest medical and agricultural chemicals manufacturer in the country, has begun to supply still another oil gas propellant (under the trade mark "Merton") to the industry. By the use of this propellant Takeda has been able to cut the price of its 12-ounce insecticide package by one-sixth. Sanyko Seiyaku K.K. is following Takeda's example, under the trade mark of "Sanpasol", and the Ajinomoto Co. (known for M.S.G.) is also putting an insecticide on the market using a similar oil gas propellant. In fact, all Japanese manufacturers seem to be turning to oil gas propellants as a solution to present high propellant costs.

Most of these manufacturers are using a formulation combining pyrethrins and MGK 264 (about 90% of all Japanese aerosol insecticides currently employ this mixture). Of late, another combination of pyrethrins, MGK 264, and MGK Repellent 11 is gaining some popularity. The formulation for this is:

Allethrin	0.05%
Pyrethrin	0.05%
MGK 264	1.00%
Lindane	0.20%
MGK R-11	0.20%
Deobase	18.50%
Propellant	80.00%
Total	100.00%

AS TO non-propellant developments in Japan, it should be reported that The Nippon Aerosol Industrial Co., Osaka, a pioneer in the field of aerosol cosmetics, has ceased operations. The Japanese aerosol industry, consisting as it does of so many small manufacturers, seems to grow and disappear quickly.

The main reason for this seems to be that so many manufacturers begin with limited capital and then lay too much stress on sales campaigns. Since the value of aerosol cosmetics is not generally known to the Japanese pub-

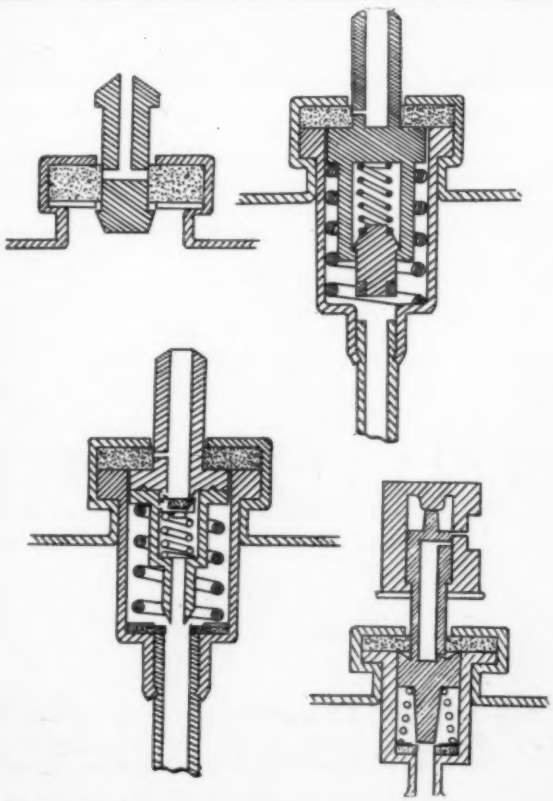
lic, only a moderate sales campaign seems advisable on a small company budget. Another reason for the high rate of business mortality is the constant competitive struggle among these small manufacturers which inevitably leads to increased price-cutting until they begin driving one another under.

Then too, there is the obvious factor of the relative primitiveness of the Japanese aerosol industry. There is no specific aerosol filling machine equipment manufacturer in Japan to this day, so that nearly all Japanese cosmetic and insecticide manufacturers have had to construct their own filling machines. Three of four manufacturers claim to be equipped with automatic filling machines; but none of these is actually wholly automatic. In fact, only about 30% of their equipment works automatically.

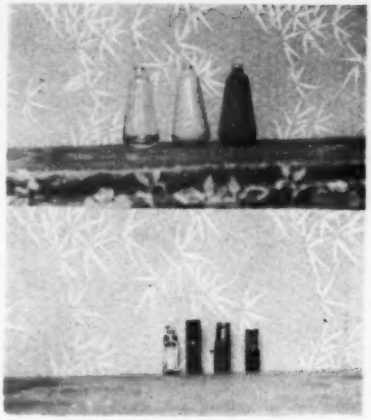
A recent interesting development in Japan has been a new container introduced by a Tokyo firm not long ago. The coating is done by spraying rayon filament on the exterior of a glass container (by means of an electrostatic flocking machine). The percentage of resistance against explosive stress is lower in these new containers than for vinyl covered containers, but this rayon serves especially well to neutralize shock concussion.

The suppleness and gorgeous appearance obtained by this coating method (as an addition to the vinyl coating) will at the same time heighten the overall elasticity and increase neutralization of shock concussion resistance. The special attraction of this new coating is the financial one, since it can be done at very low cost.

By daubing the container with an adhesive electrified by 45,000 to 55,000 volts, and then applying the negative material to the container, a coating is obtained that will not peel in water or in most other solutions. Printing on this container is possible, and the cubic delineation is expected to enhance the sale of this type container.★



Typical Japanese valve designs. Some are of U. S. types.



Glass, plastic-coated glass and perfume size containers from Japan.

Aerosol Companies Operating in Japan

Product Makers

Dainippon Jochugiku Co.....Osaka
Nagaoka Insecticide Co.....Kobe
Nippon Spray Co.....Tokyo
Kasei Kagaku K.K.....Shizuoka
Arimino K.K. .....Tokyo
Daido Jochugiku Co.....Wakayama
Kimura Chemical Co.....Hyogo
Oshimo Kaishundo Co.....Hiroshima
Akita Biseido Co.....Osaka
Yurika Toilet K.K.....Tokyo
Mikuchi Sangyo K.K.....Osaka
Sun Star K.K.....Osaka
Koa Sangyo Boeki K.K.....Osaka
Pola Kasei Kogyo K.K.....Osaka
Hokko Kagaku K.K.....Tokyo

Perfume Makers

Ogawa Perfume Co.....Tokyo
Sasaki Koryo K.K.....Osaka
Soda Perfume Co.....Osaka
Shiono Perfume Co.....Osaka
Takasago Perfume Co.....Tokyo

Materials Suppliers

King Trading Co., Ltd.....Kobe
Mihama Shoten K.K.....Osaka
Nagase & Co.....Osaka
Nippon Shellac Co.....Osaka

Loaders

Aerosol Chemical Research Co.....Kobe
Kimura Aerosol Seizosho.....Osaka
Tokyo Aerosol Kogyo K.K.....Tokyo
Aerosol Kogyo K.K.....Osaka
Tokyo Aerosol Kagaku K.K.....Tokyo

Container Makers

Asia Kinzoku Kogyo K.K.....Osaka
Toyo Seikan K.K.....Tokyo
Amagasaki Seikan K.K.....Osaka
Kamaya Kagaku K.K.....Tokyo
Taiyo Chubu Co.....Osaka
Zenyu Kinzoku K.K.....Osaka

Spray Valve Makers

Aerosol Chemical Research Co.....Kobe
Mitani Valve Co., Ltd.....Tokyo

Propellant Makers

Osaka Kinzoku Kogyo K.K.....Osaka
Nitto Kagaku, K.K.....Tokyo

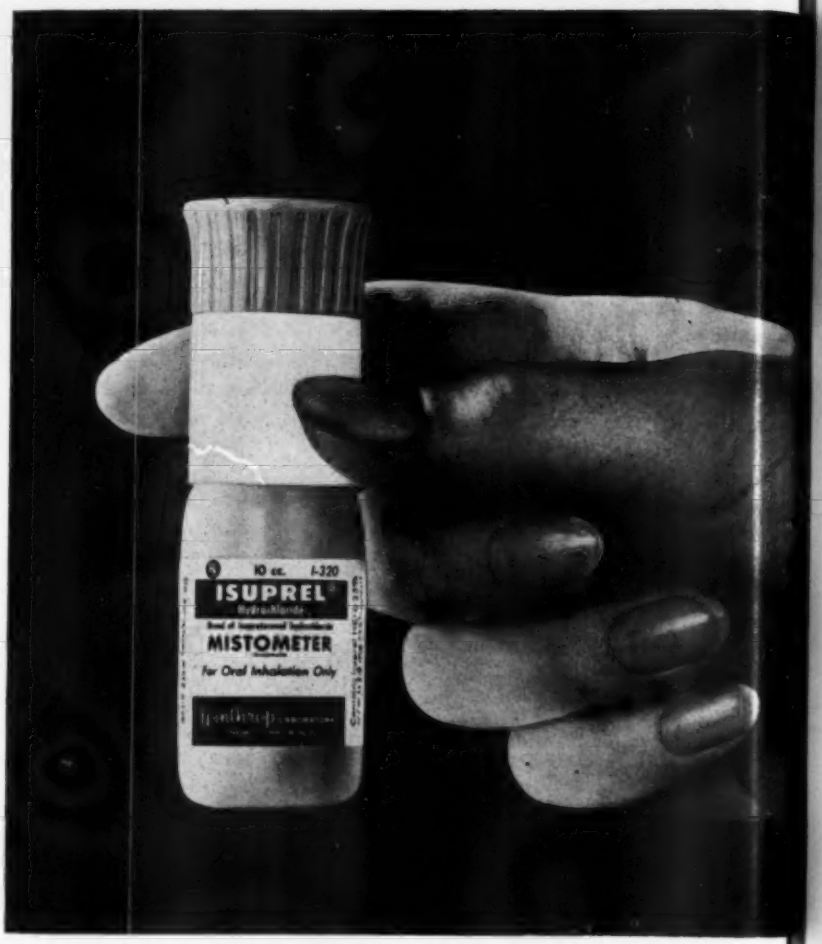
Filling Equipment Maker

Aerosol Chemical Research Co.....Kobe

Krylon's new line of varnish sprays are said to be able to resist alcohol, salt water, and hot liquids. They retail at $1.79.

Cities Service's new display unit was designed by Hinde & Dauche, Sandusky, Ohio, for Ames Chemical Co., Oak Park, Michigan.

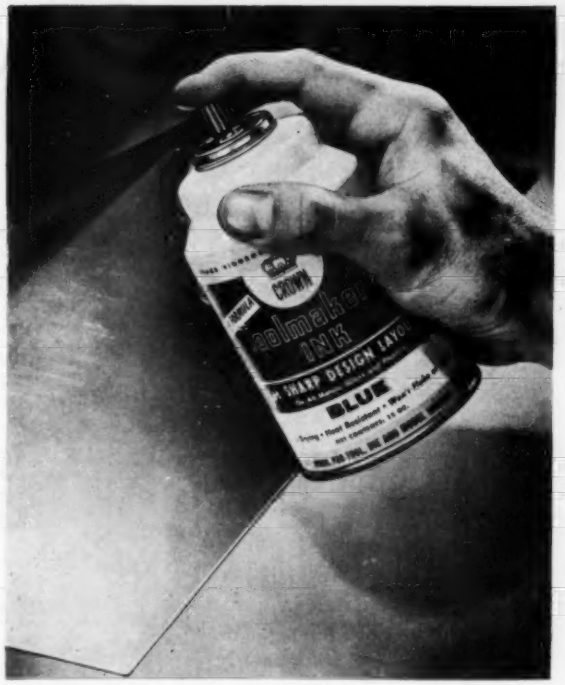
DuPont's five-ounce Insect Repellent Sprayer protects against mosquitoes, chiggers, ticks, fleas, and biting flies. The product comes in lotion form.



Isuprel Mistometer is a new inhalation aerosol being offered by Winthrop Laboratories, New York. It is equipped with a metered valve and provides bronchodilator therapy for instant relief from asthmatic attacks. The spray consists of 0.25% Isuprel hydrochloride solution and propellant for 200 inhalations.

NEW PRODUCTS AND PACKAGES

Love Lace Cologne Mist, a new aerosol being manufactured and distributed by John H. Breck, Inc., Springfield, Mass. is retailed at $3 plus Federal tax in a 3.5 ounce coated bottle. The bottle is pink and the box is pink and gold.



Toolmaker's Ink is a product of Crown Industrial Products Co., Chicago, designed mainly for tool, die, and model makers, machinists, production layout men, etc. It is being sold in both six and 12 ounce containers.

Cyclax Hair Mist, one of the newest products from Australia, is the first hair lacquer packaged in that country to use Risdon's "Micro-Mist" mechanical break-up actuator. It retails at about $1.85. Valve and actuator were made by National Radiators, Ltd., Port Melbourne, a Risdon licensee.

Floral Spray Paint is a new product of Plasti-Kote, Inc., Cleveland. Designed for tinting and painting of floral and decorative objects, the new product is available in a wide selection of colors. It retails at $1.89 in a 16-ounce container, and is available in blue, silver, yellow, lime, etc.

Acrolite Uses "Mystery" Campaign to Introduce New Fixative

Murray Poznak, Acrolite president, holds container of new product. Table holds other products in company's line.

TO INTRODUCE a "revolutionary" new artists' fixative in aerosol form, Acrolite Products, Inc., West Orange, N. J., recently used a whole series of "teaser" advertisements, secret formulae, and veiled promises of a "mystery" product. All this was part of a planned advertising and merchandising campaign to stir up interest in new "Odorless Acrolite". To find out how succesful this campaign was, *Aerosol Age* interviewed Murray Poznak, founder and president of the firm, who thought up the whole idea.

According to Mr. Poznak, introduction of many of the elements of an E. Philips Oppenheim spy story into what might have been a standard advertising campaign was highly successful.

"The essential problem was no secret," Mr. Poznak points out, "Artists' fixatives had a distinct smell, and people who had to work constantly with these plastic spray materials suffered sneezing and coughing spells, headaches, and other unpleasantness which interfered with their work. Our problem was to formulate the annoying odor out of the product, at the same time keeping its important fixative properties (the real reason for the customer's buying it)."

"Time after time we were able to find formulas which eliminated the odor, only to have the quality control laboratory veto them because they either damaged art work or just didn't do the job at all effectively. Altogether, it took 36 months of often tedious experiment to reach a carefully refined formula that stood up to six months of testing by quality control, including aging under sun and infra red lamps and salt water immersion tests."

To get final confirmation of how successful the product was Acrolite went directly to the art field. Unlabeled samples were sent to 123 artists and art firms and of this number, 93.4% reported that they found the product odorless and highly effective.

The next problem was how to get a product which had obviously been long sought after and which most people therefore thought was not possible to make, into the hands of these people to use. The "teaser" campaign was tried first, and seemed to be immediately successful.

A continuing series of preliminary small advertisements was run in art journals noting the coming of a "revolutionary new product." No more details were given. The Acrolite management realized that most readers would probably look with skepticism on such a claim, but was actually aiming the campaign at Acrolite distributors and retailers.

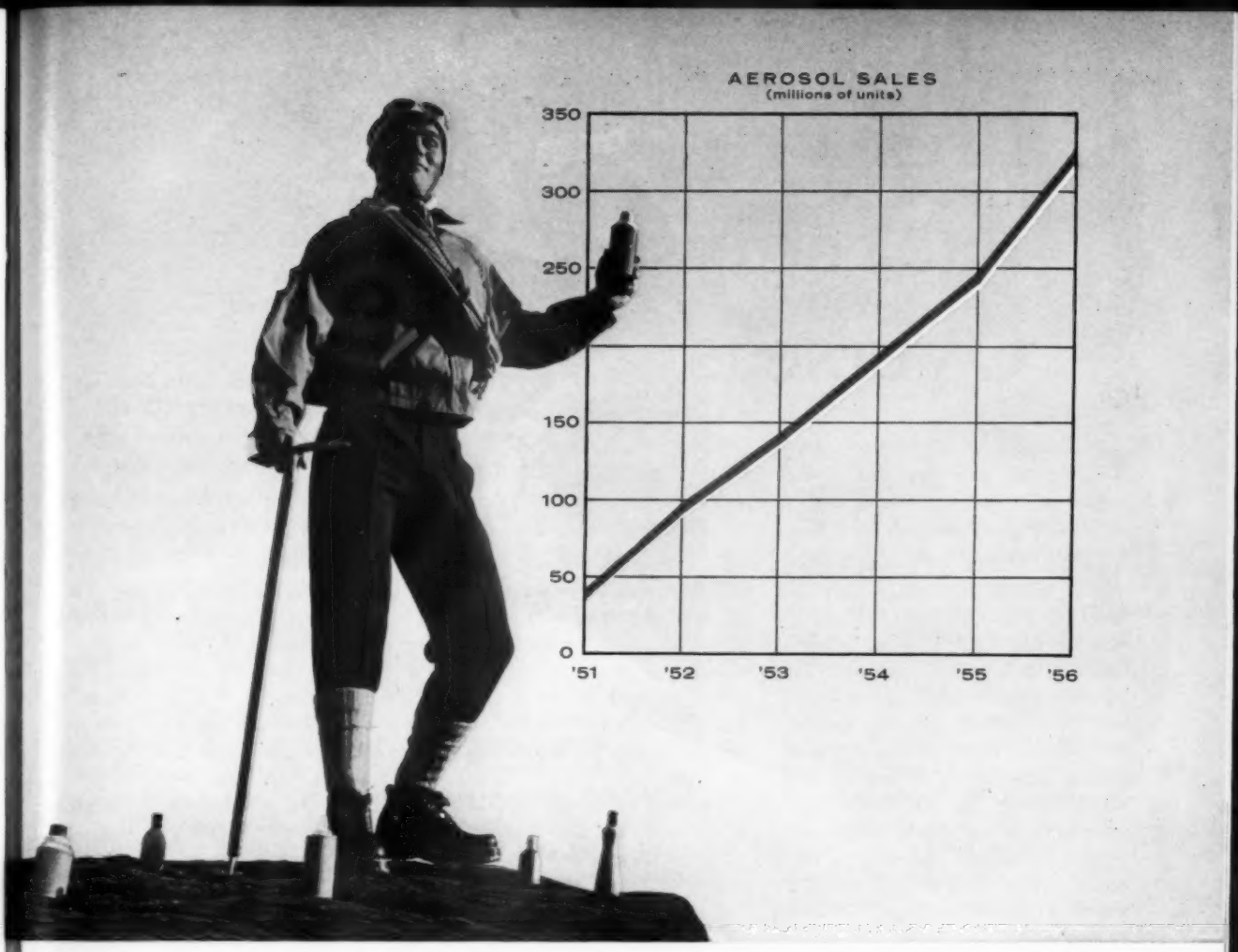
Almost immediately Acrolite's home office was besieged by requests for information by these distributors and retailers. All inquiries were gently stalled with the assurance that current customers would be the first to know. To further whet their appetites, two carefully-spaced telegrams were sent to all distributors.

By this time, Mr. Poznak says, interest was reaching a peak. "One Midwestern dealer telephoned me and said 'If you don't tell me what this is all about I'll drop your whole damned line'."

Fearing that this reaction might not be isolated, Mr. Poznak advanced the introduction date six weeks and broke a full scale advertising campaign unveiling the product in December.

"Actually, our only other problem

(*Continued on Page* 79)



AEROSOL PACKAGING

can start sales climbing for you!

Here's how we can help . . . You know how dynamic the aerosol field is—and how profitable it can be. You've seen aerosol sales increase about thirty per cent, year after year, with no end to this phenomenal growth in sight.

Do *you* have a product that could share in this growth?

If it can be sprayed, brushed on, dusted or daubed, your product is a likely candidate for aerosol packaging. And General Chemical will be glad to help you get started.

Without cost or obligation to you, we will supply fact-packed technical manuals and basic market information . . . data on many promising new types of aerosols . . . and extensive information on the valuable services offered by contract fillers—who can put up your product in aerosol form for test marketing and handle full commercial production, too.

We will be glad to tell you, also, how "Genetron"® aerosol propellants can put exactly the right "push" behind your product. To arrange for a special presentation, simply call or write.

"genetron" department
GENERAL CHEMICAL DIVISION
ALLIED CHEMICAL & DYE CORPORATION
40 Rector Street, New York 6, N.Y.

The right propellant for every aerosol need

genetron®
aerosol propellants

Pressure Packaging Overseas

Dr. Tom C. Clark, of Druk-Pak, Ltd., Zurich, European correspondent for AEROSOL AGE, reports on a German aerosol marketer with the most varied product line in Europe.

WITH another good year behind it, Europe's aerosol industry enters 1958 full of optimistic plans and expectations. 1958 is everywhere looked to as promising Europe's first big aerosol year, and the plans for it have been carefully laid over the past six months. These plans are not limited geographically, and in fact extend from the Baltic to the Mediterranean, from the East Zone boundaries to the Atlantic. We know of several new large (5,000 to 8,000 units-per-day) pressure loading stations for Europe which will go into operation in Germany and Great Britain during the first quarter with plans to push shaving lathers and foams at lower prices. Some insecticide people are running their lines to capacity during January and February to meet anticipated intensified mid-summer demand. Valve and container manufacturers are preparing for similar increases, and advertising programs have been laid out to reach consumer levels. Indeed, all indications point to 1958 as Europe's biggest aerosol year to date.

However, it is in consumer advertising that the industry appears to be making major strides. In order to get its products off the shelf and onto the sales counter, Spruehtechnik Ltd. of Rheinfelden, one of Germany's largest loaders (with about 20 different products on the market) has dressed up its labels and added an eye-catching cardboard cut-out which fits over the mounting cup (this being held in place by the cap). Attractive sketches with practically no text, show the customer what the product does. Quarter, half and even full-page ads featuring various aerosols are beginning to appear in the more popular weekly picture magazines; and in the movies pre-program advertising slides carry announcements on new aerosols and their uses.

Some six-ounce size containers are now down to DM 3.45 (about 80 cents U.S.), a price under DM 3.50 (corresponding roughly in both purchasing power and sales appeal to our 98 and 99 cent items) having been the goal for some years. We understand television demonstration programs are planned for later and, though Madison Avenue motivation research techniques have not yet hit European advertising media, there is every indication Europeans are getting around to their own version of the same thing. Being the original home of psychology, we predict some interesting developments when MR (motivational research) takes hold in Europe.

In the container field we have seen some new four-ounce mono-block (or one-piece) aluminum cans from Italy, with the entire body anodized in various colors and a small paper label—altogether a most attractive package. With the exception of Italy, the uncoated glass bottle is not to be found in Europe. Everybody seems to be waiting for the all-plastic container and we know of a German manufacturer who now has under test several models in a new hard plastic material, said to be inexpensive. If the tests turn out satisfactorily, the product may be ready for the summer season.

ONE of Spruehtechnik's interesting products (which, so far as we know, doesn't exist on the U.S. market) is a starch spray for laundry (collars, cuffs, aprons, etc.) which is applied directly to the dampened cloth immediately before ironing. The simplicity of application and high gloss, particularly for collars, has made it a most popular product among German housewives. Spruehtechnik is a subsidiary of Dynamite Co. (formerly Alfred Nobel Co.) and also manufactures vinyl choloride which it uses exclusively or in mixtures as the propellant in its packages.

An interesting new trend in Europe can be seen in the number of people abandoning their present businesses to go into aerosols—people looking for

Part of Spruehtechnik's varied product line. More of its newly designed packages appear on page 31.

Spruehtechnik's varied product line includes all of the standard aerosol types, plus some new ones (i.e., a starch spray) that are unique to the American marketers. Simplicity of design is a keynote of the company's labels.

new fields, and who have had primarily sales experience. In some European countries, the unions are clamoring to get rid of Saturday work. Already, German shops and stores close at 4 p.m. on Saturdays and by mid-1958 this will be moved up to 2 p.m. The elimination of these concentrated Saturday sales hours, together with increasing rents and higher overhead costs, makes the going tougher for the smaller merchants and specialty shops. The number of hours worked per week (45 in offices and 48 to 52 in plants) is still high by U.S. standards, but rotating shifts, except for the daily schedule, do not meet the approval of the union for clerks and retail store employees. Faced with a diminishing return, higher costs, and stiffer competition from the growing chains, some of these merchants and shop owners are turning to aerosols. We welcome their entry into the field, since they increase competition and also bring in some new sales ideas.

The marked conservatism of the European buyer, coupled with his consistent preference for old established brand names, sets him radically apart from his American counterpart. A family buys a hand cream or a cleaning material, waxes, etc., because their parents (and perhaps their grand-parents before that) always bought that particular brand. Once in a while the manufacturer will make a startling concession by slight alteration of the label or a more modern form of packaging(plastic or paper, instead of metal), but the brand name remains. In fact, even though the product may be slightly changed according to technological, chemical, and other developments, its is hardly ever thereafter advertised even as "new" or "quite new." This situation, together with the price factor, may be the chief contributing reasons why aerosols are lagging in some European countries.

UNDER these conditions, the introduction of such new items as aerosols depends greatly on the individual push, personal recommendation, or sales talk given verbally by the shop owner or sales clerk which, in turn, will naturally depend on his mark-up or profit on the transaction. Hence, his 13 cans for the price of 12, and sometimes 50% or better, from the end-price down. But most of these practices, we are happy to note, are disappearing or lessening. As the products become better known and volume increases, customers become repeat buyers and a different product pressure-packaged is not really a "new" product, but merely "another" spraying aerosol. Thus newcomers to the loading business will find the path fairly well cleared; but if they are really serious about entering the aerosol field and have ambitions about high volume and profits, they will (in most countries, we believe) have to get started in 1958. After that, most of the products will be "old" brand names to the buying public and the prominent wholesalers with their established retail connections will be all sewed up by the leading manufacturers.

Only one factor could effectively upset this trend, and while there are signs it may be developing it could take years for its realization. This is the chain store, either with groceries and food stuffs, or at the department store level with everything from "ready-to-wear" clothing to buttons and shoes and its own separate departments where aerosols could be featured. In time, if such stores become established in Europe, they might even break down some of the preference for old brand names. But this is in the future and should it develop, would add to the business of Europe's contract loaders rather than that of the captive stations. We mention these considerations because of the increasing number of inquiries received about whether the present time is still too early, just right, or too late for beginning an overseas loading business. From where we sit, it looks just about right and after 1958 it may be rather late.

Despite all of its weather disappointments, set-backs, and production difficulties, Europe's aerosol industry did not have such a bad year in 1957. In fact, it was a better year than 1956. New stations were opened, new products appeared, advertising commenced on a larger scale, and prices generally came down. In all, we would say the increase was at least 15% over the previous year. Most important, however, are the widened horizons, particularly on the manufacturing and retail levels, for the future possibilities for the pressure package. Definitely, it *has* caught on overseas.

European Aerosol Association

Holding their first meeting on November 26, in Frankfort, the Organizing Committee set up one month previously to make concrete recommendations for Europe's Aerosol As-

(*Continued on Page* 76)

1st For Custom Packaging

STALFORT

Since 1868, one of the leading manufacturing chemists to develop, manufacture, and package under private labels all types of waxes, polishes, and cleaners. Custom packaging of liquids or solids in glass or tin — our formula or yours.

- Liquid and paste wax
- Deodorizers, air purifiers
- Dyes, polishes, cremes

Automatic filling and labeling equipment

1st AEROSOLS

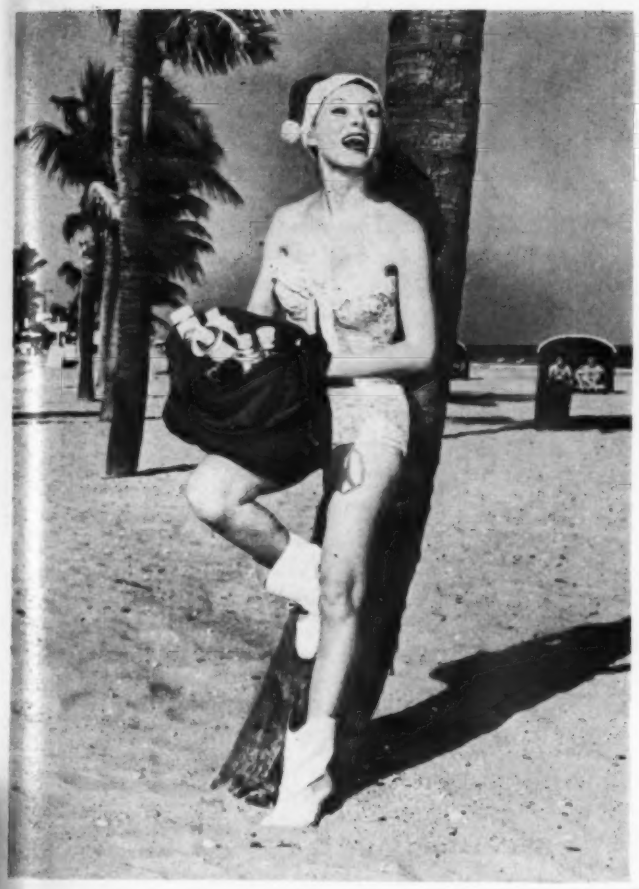
Newly expanded facilities, with a complete research and development laboratory, makes Stalfort one of the most modern and best equipped aerosol fillers in the country.

- 58,000 sq. ft. modern facilities
- Pressure fill and cold fill
- High speed filling lines
- Multi-stage Chillers & bulk storage

STALFORT PRESSURE-PAK CORPORATION

Plants — Arbutus, Baltimore Office — 321 W. Pratt St., Baltimore 1, Md.

CSMA Publicity Campaign Swings into High Gear at Florida Meeting



A series of beach shots, similar to this, were made especially for the wire services, AP, UP and INS. Datelined "Hollywood Beach" and captioned "Eleven Prize Packages," the photos featured a lovely Miami model holding the ten aerosol spray containers selected as winners in the 1957 Packaging Design Awards.

Retiring Aerosol Division president, Charles M. Beach (right) was interviewed on Tuesday afternoon, Dec. 10, by Bill Durney, radio station WGBS, the CBS Miami outlet. The taped recording was featured later that evening on the Don Butler "Personalities In Town," Miami news spot immediately preceding the Edward R. Murrow world news broadcast.

Mary Beth Lamarche, a resident of Hallandale and Hollywood, is shown holding the Aerosol Package Design Award tie-winners, Helena Rubinstein's "Five O'Clock" Spray Perfumette, and Rexall Drug's "Stag" Aerosol Shave Cream, after the product category winners had been announced Dec. 9th. The photo with caption story was sent to the Miami *Herald* and Hollywood *Sun-Tatler* for local news sections.

More Photographs appear on next page.

Frederick G. Lodes discusses with Mollie Turner, in simple language, how aerosols work, during a 12-minute interview over Station WPST-TV, Channel 10, Miami.

THE publicity campaign, sponsored by the Aerosol Division of the Chemical Specialties Manufacturers Association, reached a peak of activity during the association's December convention at Hollywood Beach, Florida. Leading figures in the aerosol industry appeared on Miami television and radio stations, a series of newspaper publicity stills were taken, and the Aerosol Division's film "The Magic Button" had its public premiere. Also the division's publicity program issued a detailed report on its activities from Sept. 5 to Dec. 10.

Highlight of the convention activity was the premiere of the film "The Magic Button," which was seen first by the convention delegates and later the same day by television viewers in the Miami area over station WPST-TV. For the rest of the convention the film was shown repeatedly on a special screening device in the room holding the Aerosol Package Awards exhibit.

Right after the convention, the seven-minute film was distributed nationally, and during the first half of 1958 will be shown by a minimum of 75 television stations across the country. The film, which makes no mention of the CSMA or of any particular product names, follows the exploits of a small boy (well equipped with aerosols), who shows the people of a small town some of the many uses of pressurized products.

The Miami showing of the film was part of a general aerosol interview of Frederick G. Lodes (president of Lodes Aerosol Consultants, Inc., New York), head of the aerosol publicity committee, by Mollie Turner on station WPST-TV. One of the highest rated daytime shows in the Miami area, the show is aimed primarily at the housewife. Mr. Lodes spoke with Miss Turner for twelve minutes prior to and after the showing of the film.

The publicity committee also succeeded in getting some prime radio time on Dec. 10. In the morning of that day H. R. Shepherd (president of Aerosol Techniques, Inc.) was interviewed by Billie O'Day on her morning housewife's show over station WCKR, NBC's Miami station. Mr. Shepherd discussed at length the subject of aerosols of the future, paying particular attention to food and toothpaste aerosols.

On the afternoon of the 10th Charles M. Beach (general manager of Stalfort Pressure-Pak, Inc.), retiring Aerosol Division chairman, was interviewed on radio station WGBS by Bill Durney. A recording of the interview was featured later that evening on the Don Butler "Personalities in Town" program. Since WGBS is the CBS outlet in Miami, the publicity committee succeeded, in two days, in getting three radio interviews and one television interview — all on major stations and all on the subject of aerosols.

In its report to the CSMA membership, the publicity committee reported on a number of other developments over the period from Sept. 5 to Dec. 10. Editorial guidance was supplied by G. M. Basford, agency for the committee's program, for articles in *Seventeen*, *Coronet*, *American Home*, *Modern Packaging*, and several other consumer and trade magazines.

Also, G. M. Basford reported the distribution, in mat form, of a release entitled "New Rx-Accurate Medicine Dispenser" to 1500 newspapers throughout the country. This particular release depicts how accurately medicine dosages can be measured by metered aerosol valves. A previous

(*Continued on Page 74*)

H. R. Shepherd (left) is interviewed by Billie O'Day on her morning housewife's show over radio station WCKR, Miami NBC, on Tuesday morning, Dec. 10. Roger Conklin, spot announcer for the program, assists Miss O'Day in questioning her guest. Mr. Shepherd discussed at great length fascinating aerosols of the future.

Consultant's Corner

by Robert A. Foresman, Jr.

Some Comments on Food Aerosols

APPARENTLY food aerosols are on their way. Development programs long under wraps are coming to fruition and new ones are being instituted in a near frenzy of activity. Constructively nurtured, these completely new concepts of food packaging can be an economic shot in the arm for aerosols, as well as for food merchandisers.

With all the hoopla of the "pro" side being currently bandied about, it seems necessary that the "con" side of the picture at least be considered.

My comments are not directed at those already in the food business (and who are incidentally in the aerosol field) or to the large aerosol operations employing a broad scope of technical direction.

In the last four months I have heard directly or indirectly of at least five medium size aerosol installations preparing to enter the field of food aerosols. In addition, every one is exploring the uses of nitrogen, which will ultimately carry with it investigation into pressure packaged foods.

The basic technique of producing food aerosols is not difficult and nominally presents fewer problems than ordinary aerosol packaging. However, there is one important aspect of pressure packaged foods that may not be obvious early enough for the packager to avoid what could well be a major disaster, particularly for uninitiated food handlers. Food poisoning in my estimation is so nearly inherent in ill-advised and inexpertly-handled pressurized foods as to constitute a blood chilling threat to the whole industry. It does not have to happen, but it surely will if certain fundamental concepts and procedures are not followed.

Bacterial spoilage of food can cause sickness and even death in two ways: by introducing pathogenic bacteria (which have multiplied in the contaminated food in large numbers) into the human body; or by introducing potent chemical toxins produced in the food by the life processes of relatively few bacteria which exist only in contaminated food. These toxins can be so powerful that half a green bean seed from a can in which *Clostridium botulinum* has grown will kill an adult as surely as a bullet.

Before anything else, and regardless of how far the planning has gone, not a single sample (much less market survey quantities of samples) should be delivered to a customer unless an experienced food chemist is in the picture (either on the prospective customer's staff or on the aerosol plant staff). When this requirement is met, the problems peculiar to pressure packaging must be considered by him (the food chemist) as well as all others concerned.

An immediate reaction to all this may be "what's all the fuss about—look at whipped cream!" It is true that pressurized whipped cream does enjoy a genuine reputation for wholesomeness. However instead of discounting what I have said previously, the whipped cream situation actually substantiates it. First, whipped creams are dairy products subject to all the carefully enforced regulations and laboratory control requirements that are nearly universal for milk products (and practically non-existent for all other foods). In addition, they must be handled as fresh dairy products under refrigeration which inhibits rapid spoilage (and which indicates to all concerned that the product is known to have a limited shelf life and is expected to spoil within a relatively short time). Also the type of spoilage encountered in pasteurized milk products is not generally dangerous due to the elimination of pathogens by the pasteurizing process and the tendency of non-harmful bacteria to overwhelm the harmful ones as bacterial growth occurs. On top of these safeguards, practically all of the whipped cream is packaged in dairy plants and by personnel well versed in dairy technology.

In almost all fluid food packaging the food is introduced hot, directly from the cooker, or else (as in normal canning) cooking and its sterilizing effects are accomplished after closing. Almost any procedure allowing possible contamination during and after filling will be applied only to products constituted so that high sugar (jellies), high salt (olives), or high acid content (pickles), will inhibit the growth of bacteria and consequent spoilage. Furthermore—this too usually takes place with bacteriological control of all processes.

The difference between the foregoing and what *can* occur in an aerosol plant attempting to handle complex recipes without the proper procedure is startling. Let us consider the preparation of a hypothetical product made up from a complex recipe. It may be decided that the product should be filled cold since gassing is not as efficient if the contents are hot. The product is allowed to cool by standing under conditions allowing

(*Continued on Page* 76)

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AEROSOLS in review

Aerosols Recommended For Fly Control on Cattle

USE of space aerosols in dairy barns may be a major contribution toward effective control of resistant flies, Dr. W. E. Dove, of the Fairfield Chemical Division of the Food Machinery and Chemical Corp., reports in the December issue of *Agricultural Chemicals*. Dr. Dove declares that surface spraying, which had been the prime method of dispensing insecticides in barns, actually contributes toward fly resistance to chlorinated hydrocarbons and certain other insecticides.

The use of space sprays, he points out, is about the only effective means of controlling horn flies, which are carried by the animals into the barn, and very rarely leave the cattle to land on the sprayed surfaces. "The trend now is toward fogging and space spraying while the animals are in the barn, and before milking to attain a higher degree of fly control. This operation not only eliminates the flies in the barn and on the animals, but gives a noticeable degree of protection to the animals when they are returned to pasture."

Dr. Dove reports that a combination of pyrethrins and piperonyl butoxide has been successfully adapted for use in cattle aerosols. "The Food and Drug Administration reviewed data on milk and meat of animals that had been sprayed for long periods of time, and has stated to the USDA that it takes no exception to the use of fly sprays containing piperonyl butoxide and pyrethrins.

"Aerosols for dairy use are available in low-pressure size of 12 and 16 ounces and two and one-half pounds, and a five-pound high pressure bomb."

Good results have been obtained on both the flies within the barns, and for flies attacking the cows in pasture, and for horn flies entering the barn on the animals.

"The farmer must overcome a fallacy in judgment that is becoming more and more prevalent — that all of the flies on his farm are resistant to all insecticides. Investigations of combinations of pyrethrins and piperonyl butoxide deny this generalization . . .

. . . "Resistance is a constant problem, of course. This quirk of nature probably is responsible for the fact that the old-fashioned fly baits and sticky fly-papers are coming back."

Dr. Dove pointed out that, with these pyrethrin-based aerosols "the farmer is in a better position today to meet the fly problem in an easier, more effective way, and produce a pure, uncontaminated milk, than he ever has been before in the history of farming."

•

THE addition of five to ten percent water in all fragrances enhances the finished product and makes its use in certain aerosol containers much easier, it is reported in the December issue of *The Givadanian*, monthly house organ of Givaudan-Delawanna, Inc., New York. "The use of hydro-alcoholic solutions in glass containers has a tendency to reduce the sharpness of the co-solvent used and also permits a better spray pattern and a lower concentration of propellant.

"When the fragrance is packaged in aluminum, the added water tends to inhibit the reaction between the alcohol in the formulation and the container. As a result, there is a longer period of stability and shelf life for the finished product. It is, however, absolutely necessary to select the proper propellants and to avoid any which may be subject to hydrolysis.

"The perfumer too has greater flexibility when 5/10% of water is used in the formulation. This addition seems to enhance the odor effect when the fragrance is applied to the skin and also enlivens the odor of the end product.

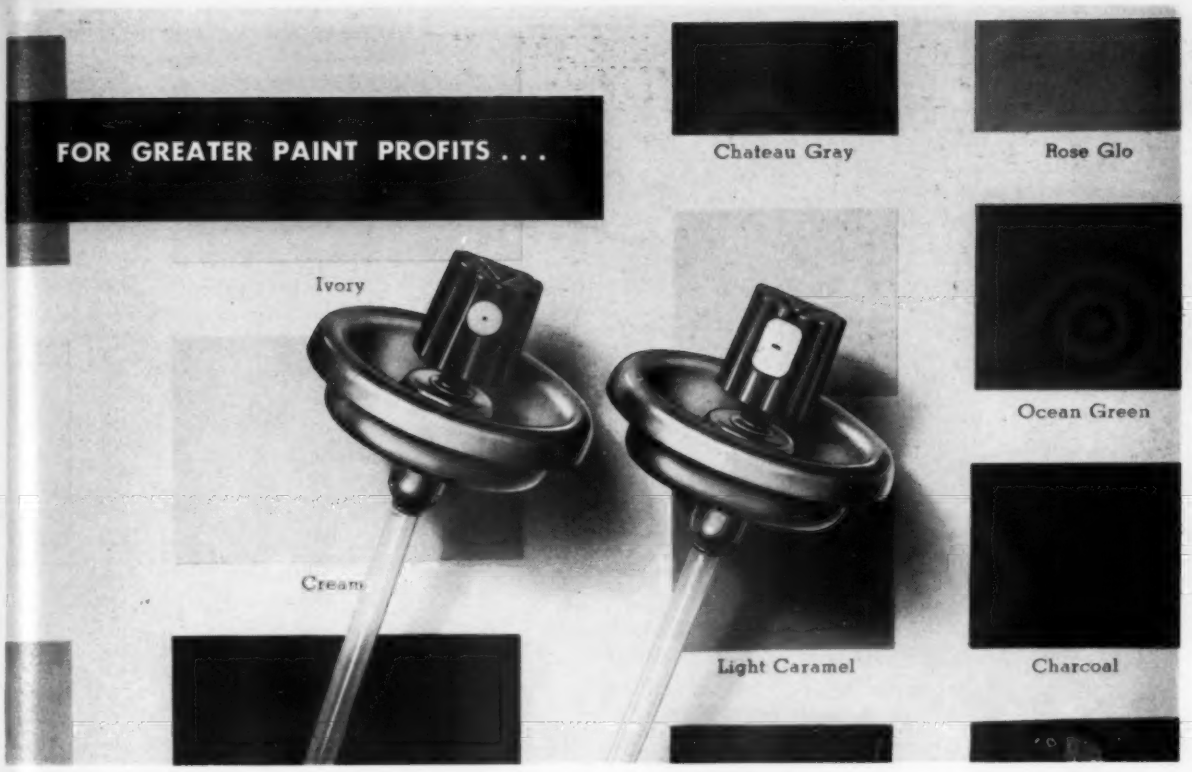
"Alcoholic solutions must be processed in the same matter as conventional products. They must be aged, then chilled and filtered before being pressurized with the propellant."

•

A DISCUSSION of the problems of decorating aluminum aerosol cans is featured in the November issue of the English trade periodical, *Journal of The Institute of Packaging*. Written by Edward Richardson, under the title "Design and Aerosols," the article makes a particular point of the fact that, because of the considerably more visible areas involved, variations of color in the solid areas of color on aerosol cans attract a higher degree of criticism than any that arises with collapsible tubes.

Mr. Richardson points out some of the similarities that exist in the decoration of collapsible tubes and aluminum aerosol cans. "Both are printed in the same way. The tube or can is given a base coat of one color and allowed to dry. All the other colors are then printed simultaneously from a number of rollers, involving rotation. That is, the containers are printed in the round, after forming, all colors except the base coat being wet.

"Long experience with collapsible tube printers shows that they are



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quick to point out difficulties, but generally do a much better job than they lead you to expect. They prefer not to print one wet color on top of another, but manage this quite well provided that it is a dark color which is printed on top of a pale one, and that any lettering or design details are not really small or fine. They even make quite a good job of pale reversed lettering showing through a patch of dark color, providing the letter is not so small as to fill up with ink. Of course, the lower color may affect the upper one. If one prints blue on yellow, for example, the blue will go towards green.

"The printing of extruded aluminum cans, though done in the same way, does not seem to produce the same results. Probably the larger diameter of the cans has something to do with it. It seems to be impractical to print wet on wet at all, and all colors must be separated by a faint white space. Lettering in one color surrounded by another color often does not print sharply unless it is quite a size—the scale seems to be much larger than that which holds for collapsible tubes. Nor is the register so good as is usual with collapsible tube printing, and this can produce disturbing effects if the design contains fine details. Further, a can printer himself told me that large areas of solid color (apart from a base coat) are difficult and no two cans will be exactly alike, some taking more color than others, according to the way the ink flows from the rollers."

Mr. Richardson warns that the contents of aerosols sometimes attack the print. "The liquid may pass from the spray to the fingers and thence to the can, or there may be some dribbling at the moment of spraying. In any case, some members of one's staff are sure to rub some of the liquid onto the ink, just to see what happens. The print can be treated with a protective lacquer. Recent experience has shown that this is not quite enough. Cans which had been treated in this way and thoroughly tested in prototype form broke down on deliveries, with the ink coming off, and had to be rejected after they had been filled. It is now clear that the printing ink must, when some types of contents are to be packed, be matured for several weeks before filling. Once the ink has hardened in this way, it is far more resistant than if the cans are filled almost immediately after printing."

•

THE age of a bleached shellac has a distinct bearing on its value as a hair lacquer, declares Jack Pickthall, chief chemist of Polak & Schwarz (England) Ltd., in his column in the January issue of *American Perfumer*. He reports that "Old samples often produce cloudy solutions in alcohol and solutions, clear when made, often precipitate with time."

"Further, we have proved that hair lacquers based on bleached shellac may lead to corrosion troubles in metal containers. These troubles have been overcome when the bleached shellac has been replaced by dewaxed but unbleached grade. We have been pretty certain that the chlorine from the bleaching agents has been the root of the trouble and have for some time advocated the use of unbleached shellac. After all, the question of color is of little importance in this class of product."

•

SOME German scientists are criticizing the aerosol technique as being not "suitable" for air deodorizing and disinfection, for inhalation purposes, and even for insect control, reports *Chemische Rundschau*, chemical trade paper published in Solothurn, Switzerland. The criticism "applied not only to the atomizing performance of aerosol packaging for producing suitable particle sizes, but even on the efficacy of deodorizing, anti-bacteriological, and insecticide substances, as used in recognized products."

The article expresses considerable surprise about the existence of any such opposition, pointing out that in other countries aerosol packaging is regarded as a prominent instrument for medicine, hygiene, and science. It suggests that German scientific and technical institutions have not sufficiently occupied themselves with study of the rudiments of the aerosol technique and its practical potential.

•

THE main possibilities for the use of glycerines in aerosols lie in aqueous-based systems (including emulsions) declares Jack Pickthall, chief chemist of Polak and Schartz (England) Ltd. in an article in the December issue of the English trade periodical, *Manufacturing Chemist*. He declares that, because of glycerin's low solubility in the halogenated hydrocarbon propellants, there has been a tendency to overlook its po-

(*Continued on Page* 75)

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NEWS of Pressure Packaging

Lee Joins Old Empire

Old Empire, Inc., Newark, N. J. custom filler last month announced the appointment of Harold Lee as manager of aerosol product sales. Mr. Lee had been eastern sales manager of Continental Filling Corp., Danville, Ill., and prior to that was vice-president of G. Barr & Co.

Harold Lee

Mr. Lee, the developer of at least four successful aerosol products himself, began his aerosol career as purchasing agent for Revlon Products Corp., New York. His experience also included supervisory and development work in glass, plastics, metals, and machinery associated with the packaging industry.

•

Titan Chemical To Move

Titan Chemical Industries, Inc., Colorado aerosol filler, has announced the removal of its plant from its original operating base in Colorado Springs to a new site in Denver. Titan will occupy a plant at 3005 Huron St., Denver, part of a group of buildings vacated last year by Mine & Smelter Supply Co.

Everett Cole, Titan president, said the move was being made to permit consolidation of the company's activities, and to save in transportation costs of raw materials and finished products. The company's sales office had been in Denver since the organization of Titan in 1957.

According to M. M. Reynolds, plant manager, Titan is negotiating with a supermarket chain for distribution of its product line throughout the Rocky Mountain region. The product line currently includes a lingerie spray, a hand cream, a shave lather, and six different air freshners.

Titan's Colorado Springs plant was recently sold to Clifton Precision Products Co., a Colorado Springs electronics parts manufacturing firm.

•

Carbide Names Leighton

Union Carbide Chemicals Co., New York, has announced the appointment of William B. Leighton to its fluorocarbons technical service staff. He will head the aerosol laboratory and be responsible for its integration with the propellant sales staff.

Mr. Leighton joined Carbide in 1936 and has done work in solvent recovery systems and design.

New British Aerosol Firm

Swallowfield Aerosols, Ltd., a new British aerosol filling and exporting firm, has been incorporated in Swallowfield, Wellington, Somerset, by the directors of Walter Gregory & Co., Ltd., leading English aerosol marketer. Capital is £10,000 or the equivalent of $28,000.

•

Hair Sprays High in Survey

Aerosol hair sprays are currently being used by 51.2% of senior high school girls and 62.5% of junior high school girls, it is reported in a new survey just released by Scholastic Magazines. The study was conducted among junior and senior high school girls all over the country, and also covered lipsticks, nail polishes, and other cosmetics.

The study revealed that 25.3% of these girls are not customers themselves, but instead borrow from their mothers. The drug store is the prime market for the girls who do buy their own, 66.8% of the girls in senior and 69.4% in junior high schools reporting they buy in drug stores.

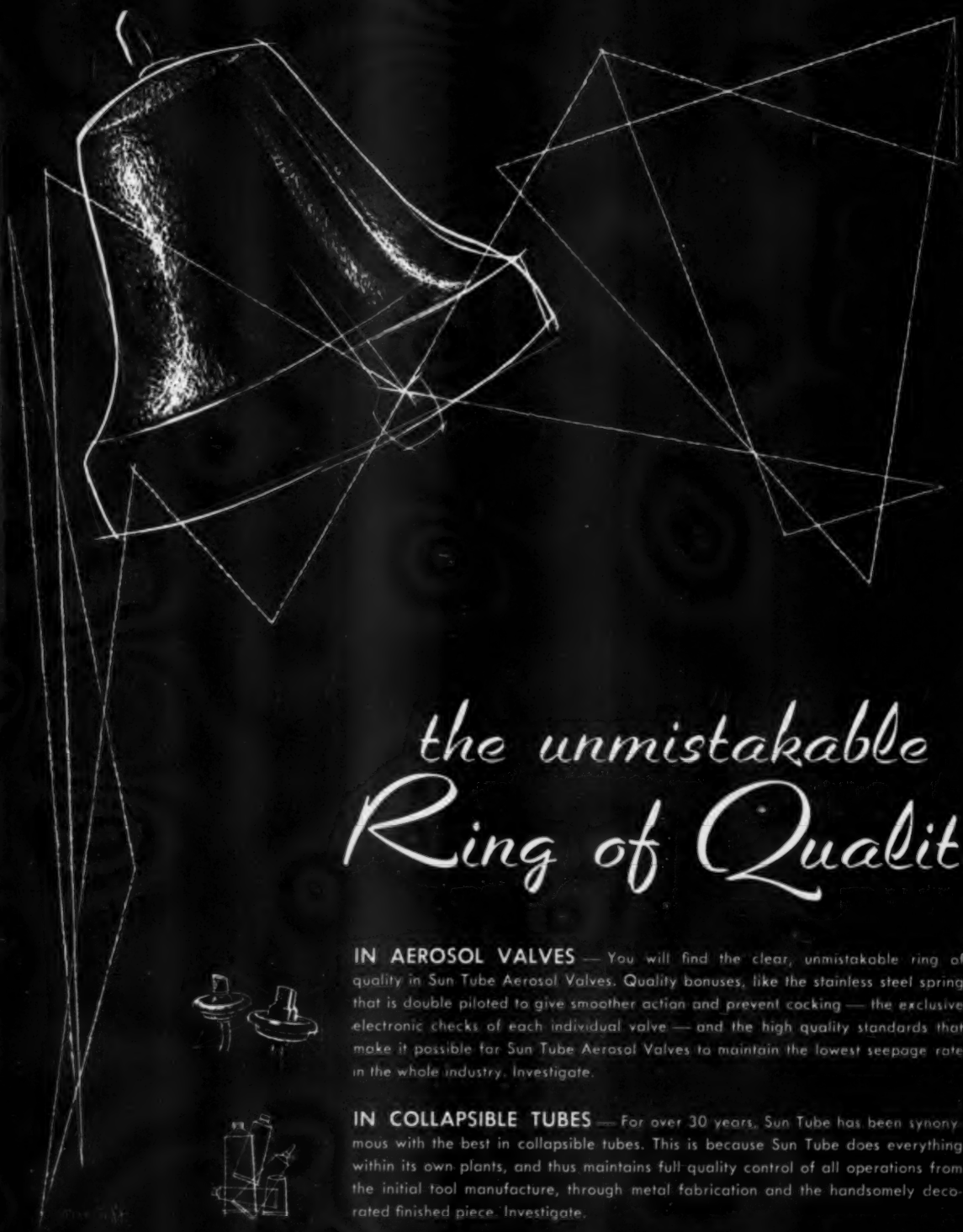
Gebauer Co. Purchased by Cleveland Group

Gebauer Chemical Co., Cleveland, pioneer aerosol firm, was acquired last month by a group of Midwestern businesmen, mainly from the pharmaceutical field. The group is headed by E. W. Rose, Jr., who succeeds the late Charles L. Gebauer as president of the company.

According to Mr. Rose, the company's plans for 1958 include further modernization of production, advanced packaging, and long-range promotion. The company will maintain "Ethyl Chloride", "Tannic Spray", and the new, non-flammable "Fluro-Ethyl" as its prime product line. The Gebauer Co. also is the developer of the "Dispenseal" bottle, one of the major breakthroughs in the aerosol industry.

Mr. Rose has had 18 years' experience in advertising, production and marketing in the drug field. He has served in executive capacities with the E. W. Rose Co., the Musterole Co., and Plough, Inc., of Memphis.

His father, E. W. Rose, Sr. was elected chairman of the board and a director of the reorganized Gebauer company. Other officers are Vennie A. Rose, vice-president and director; T. F. McDonald, secretary; and Harlan S. Yenne, a vice-president of the Cleveland Trust Co., a director.



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Bar Methoxychlor for Cows

The Commissioner of Food and Drugs last month ruled against the application of methoxychlor to dairy cows when the method employed leaves residues of the poison in the milk. Methoxychlor had been one of the principal insecticides currently being tested for extensive use in aerosol cattle sprays.

The Commissioner's action, which has the effect of outlawing such methods of application to keep cows free from flies, was in the form of a regulation setting a zero tolerance for methoxychlor in milk. Use of the insecticide in ways which do not result in residues in the milk is not affected by the action. The ruling, printed in the Jan. 17 issue of the *Federal Register*, is effective immediately, but can be appealed within 30 days.

The FDA's action was on a petition by E. I. du Pont de Nemours & Co., requesting a tolerance of 0.25 parts per million for methoxychlor to permit use of the pesticide as a fly spray on dairy cattle.

Because of the unique place of milk in the diet, the FDA had asked the National Academy of Sciences to select an advisory committee of scientists to consider the petition and to make a report and recommendations (as provided for by the pesticide law). The committee was headed by Dr. Herbert E. Longenecker, vice-president of the University of Illinois.

The committee found that the data on safety were inadequate to justify the establishment of a tolerance which would permit any measurable residues of methoxychlor in milk. Summarizing their position, the committe pointed to the long-standing policy of the FDA and food officials that no poisonous or deleterious substance be sanctioned in milk, and recommended that, in view of the importance of milk in the diet, a greater margin of safety must be established in fixing any tolerance than would be the case for any other food item in the human diet.

•

Shiftan on Radio Program

Ernest Shiftan, vice-president and chief perfumer of van Ameringen-Haebler, Inc., New York appeared recently as a guest on WCBS' radio program, THIS IS NEW YORK, and was introduced by Jim McKay, program master of ceremonies, as "Mr. Nose, U.S.A."

Ernest Shiftan

During the interview, Mr. Shiftan stated that a good perfumer has to have an odor memory for nearly 3000 aromatic chemicals and natural materials. He further indicated that a perfumer must have the imagination and skill to create a blend of as many as 300 of these materials to make a finished product that will have not only permanence, strength and evenness, but beauty and a definite theme as well.

Van Ameringen-Haebler, Inc. is a leading world producer of aromatic and perfume materials used by the cosmetic, perfume and aerosol industries.

•

Maintenance Show Planned

A greatly expanded approach to problems of industrial and building sanitation is foreseen in the third National Industrial and Building Sanitation Maintenance Show. The 1958 show, produced and managed by Orkin Expositions Management in New York, will take place Nov. 3-6 in the Philadelphia Convention Hall.

The institute came into being in October through the merger of other groups, and it already has local chapters in New York, Chicago, Washington, Detroit and Los Angeles. The November show is designed mainly for the executive involved with the purchase of industrial and building sanitation products and equipment.

Firmenich Names Zehner

Ralph C. Zehner has joined Firmenich, Inc., New York manufacturer of synthetic perfumes and food flavors, as technical director of the Perfumery Division. He was previously with Lentheric, Inc. for 16 years, and for the past year was that company's vice-president in charge of operations and director of Eastern operations.

Prior to that he was superintendent of TNT manufacturing operations for the Naugatuck Chemical Division of U. S. Rubber Co. He is a member of the American Chemical Society and the Society of Cosmetic Chemists.

•

Babbitt Elevates Three

B. T. Babbitt, Inc., New York, late last month announced a number of executive promotions in what Marshall S. Lachner, company president, terms a general strengthening of his organizational team.

John L. Woolley, a company vice-president since last year and a veteran of more than 20 years with Babbitt, was named director of sales, and will be responsible for all phases of domestic, institutional, and foreign sales. Russell W. Thatcher, who has been associated with the Kirkman & Son Division of the Colgate-Palmolive Co., became administrative assistant to the president.

Jack W. Sugden, also from the Colgate-Palmolive Co., was elected vice-president, and director of marketing. He will assume responsibility for advertising, research and development, merchandising, and promotion.

The appointments of Mr. Sugden and Mr. Thatcher bring to four the number of former Colgate executives assuming top posts in Babbitt since mid-December. Mr. Lachner and Michael P. Frawley, newly-appointed executive vice-president, are also former Colgate executives.

•

Polak's Frutal Elects Kirsh

Lazarus A. Kirsh has been elected assistant vice-president of Polak's Frutal Works, Inc., Middletown, N. Y., perfuming materials and essential oils producer. Mr. Kirsh has been with the company since 1946.

Plan 14 Packaging Meetings

Fourteen small-group meetings—12 of them covering new subject areas—will be held by the American Management Association's Packaging Division from February to June.

The division's packaging clinics, which have been a regular part of the program since 1955, will cover four new topics: problems of packaging for department and variety stores; pitfalls and cost reduction possibilities of export packaging; the purpose, make-up and successful operation of the packaging committee; and training and appraisal programs for operators, supervisors and mechanics. All of these meetings will be held in New York. One clinic, on materials and equipment in flexible packaging, will be held in Chicago March 17-19.

For the first time the Packaging Division will also offer a series of workshop seminars — meetings designed for intensive discussion and exchange of information and experience and limited to 15 persons. Subjects covered will be packaging research and its new sciences; writing specifications for folding cartons, corrugated containers, glass and closures, drums and cans, and formed plastic and flexible packaging (five separate meetings); and the traffic manager's place in packaging. All workshops will be held in New York.

Some 400 executives will participate in the packaging meetings. Close to 40,000 executives are expected to take part in A.M.A.'s spring program which includes some 400 seminars in ten fields of management, 19 national conferences, and 106 units of seven continuing courses.

•

Frawley to Babbitt Post

B. T. Babbitt, Inc., New York, manufacturer of aerosols and other household cleaning products, last month announced the election of Michael P. Frawley as executive vice-president. He had been general sales manager of the Household Products Division of the Colgate-Palmolive Co.

Magnus in Military Post

Joseph Baird Magnus, vice-president of Magnus, Mabee & Reynard, Inc., New York perfume and essential oil supplier, last month was named commandant of the Veterans Corps of Artillery, State of New York, constituting the Military Society of the War of 1812.

Mr. Magnus holds the rank of colonel in the military corps, which is the official guard of honor for the governor of New York, and in most military parades in New York City acts as guard of honor for the grand marshall.

•

Move for ICC Rule Change

A recommendation that aerosol producers be authorized to ship nonpoisonous and nonflammable formulations utilizing a liquefied gas having an absolute pressure not exceeding 85 pounds p.s.i. at 70°F. in specification 2P inside metal containers, has been submitted for inclusion in the March Docket of the ICC, it was announced by the CSMA last month. The recommendation was made, in accordance with details included in section 73.306 (c) of existing regulations, by H. A. Campbell, of the Bureau of Explosives in New York.

•

Hercules Sets Up New Office

The Naval Stores Department of the Hercules Powder Co., Wilmington, last month established its Greenville, Miss. office as headquarters for a new sales office. The office, which will be headed by Leonard V. Edwards, new district sales manager, will service Arkansas, Louisiana, and Mississippi.

The office will handle sales of all Naval Stores Department products, including meta "Delphene" (diethyl toluamide), a new insect repellent and "Delnav," a new pesticide.

•

Plasti-Kote Expands

In order to handle a 27% increase in sales volume, Plasti-Kote, Inc., Cleveland, has announced the expansion of its warehouse facilities at 6514 Broadway, Cleveland. According to Herbert Fine, president, an additional 30,000 square feet has been added to present facilities in order to take care of current operations.

Druggists Content With Varied Aerosol Brand Distribution

Druggists generally are content with present aerosol brand distribution, it was revealed last month in a survey completed by Selling Research, Inc., New York. The survey is reported on in the *American Druggist* for Dec. 30.

The study, conducted among 250 druggists in 100 markets in 37 states, revealed that 70.8% of druggists do not believe it would be practical to stock only leading brands. The preponderance of opinion favoring this opinion was considered somewhat surprising, in view of the fact that supermarkets, which offer only a limited choice of brands, have been making sizable inroads into drug stores' shares of health and beauty items.

Of the 20 different product categories in the study, only two were definite aerosol types and a third, deodorants, included aerosol products. For each category the following questions were asked:

Would it be practical for you to stock only your leading brands?

	Yes	*No*	*Undecided*
Aerosol Shaving Creams	22.8	70.4	7.2
Spray Hair Fixatives	22.8	70.4	7.2
Deodorants	22.8	70.4	7.2

How important is your present range of brands in building store traffic?

	Vital	*Helpful*	*Unimportant*
Aerosol Shaving Creams	47.2	46.8	5.6
Spray Hair Fixatives	46.8	48.4	4.8
Deodorants	46.4	48.4	5.2

In the next six months, what action do you plan to take on the number of brands you carry?

	Increase	*None*	*Decrease*
Aerosol Shaving Creams	10.0	85.6	4.4
Spray Hair Fixatives	10.4	84.4	5.4
Deodorants	11.2	82.4	6.4

Exhibits Announced for Packaging Machinery Show

THE 1958 Packaging Machinery and Materials Exposition will attract at least 20 per cent more than the 7000 people who attended the 1956 Exposition in Cleveland, K. B. Hollidge, Arthur Colton Co., exposition committee chairman declared last month. The exposition, to be held in Atlantic City, N. J., March 25-28, will extend over an exhibit area at least 25 per cent larger than the previous.

As of Jan. 6, Mr. Hollidge pointed out, over 93 per cent of available exhibit space in the huge Convention Hall had been sold, and at that date 142 leading manufacturers of packaging machinery and materials were planning to exhibit.

Many of the displays will be "action" exhibits, that is, actual working machinery in operation. All booths will be staffed by engineers and technicians to give on-the-spot answers to various packaging problems.

A series of high-level technical sessions, sponsored and conducted by the Packaging Institute, New York, will be held concurrently with the Exposition. Sessions are scheduled for the afternoon of Monday, March 24, as well as Tuesday and Wednesday mornings.

Exposition hours at the Atlantic City Convention Hall are: Tuesday, March 25, 12:00 Noon to 5:30 p.m.; Wednesday, March 26, 9:00 a.m. to 5:30 p.m.; Thursday, March 27, 9:00 a.m. to 5:30 p.m.; and Friday, March 28, 9:00 a.m. to 1:00 p.m.

The following is a list of exhibiting companies that produce aerosol equipment or materials:

Aluminum Co. of America
Pittsburgh, Pennsylvania
Booth #220

Burt Machine Co.
Baltimore 2, Maryland
Booth #622

Chisholm-Ryder of Penna.
Hanover, Pennsylvania
Booth #213

Consolidated Packaging Machinery Corp.
Buffalo 13, New York
Booth B

Continental Can Co.
New York, New York
Booth #513

E. I. DuPont de Nemours & Co.
Wilmington, Delaware
Booth #522

Elgin Manufacturing Co.
Elgin, Illinois
Booth C

The Exact Weight Scale Co.
Columbus Ohio
Booth #713

Adolph Gottscho, Inc.
Hillside, New Jersey
Booth #118 and #217

Hi Speed Checkweigher Company, Inc.
Ithaca, New York
Booth #134

Hope Machine Co.
Philadelphia, Pennsylvania
Booth #117

Island Equipment Corp.
Long Island City, New York
Booth A

Kaiser Aluminum & Chemical Corp.
Oakland, California
Booth #426

Karl Kiefer Machine Co.
Cincinnati, Ohio
Booth #701

Link-Belt Co.
Chicago, Illinois
Booth #206

Pneumatic Scale Corp., Ltd.
No. Quincy Massachusetts
Booth #505

Weigh Right Automatic Scale Co.
Joliet, Illinois
Booth #226

•

Isacoff to Head New York SCC

Harry Isacoff, technical director of van Ameringen-Haebler's aerosol research and product development laboratories, has been elected chairman of the New York Chapter of the Society of Cosmetic Chemists. Vincent DeFeo, head of the aerosol testing laboratory of Dodge & Olcott, Inc., was elected treasurer. The other officers elected for 1958 term are Theodore Ostrowski, chairman-elect, and Marti L. Zeitlin, secretary.

•

Discuss Aerosols in Parliament

Aerosols came in for considerable discussion in the Dec. 9 session in the House of Commons, lower house of the English Parliament, it was reported in several recent English trade publications. G. Nabarro, a Member of Parliament, asked Sir David Eccles, president of the Board of Trade, whether he was aware that the British export trade in aerosol packages is being severely handicapped by present restrictions imposed on their use in Britain by the high rate of purchase tax.

He suggested that Sir David seek a report on the matter from his overseas advisory staff in other countries where aerosols are manufactured and where products made up in aerosol containers are being sold in substantial quantities. Mr. Nabarro declared that such steps are necessary to see that Britain not lag behind other countries in export trade.

Sir David Eccles said he was aware of the rapid increase in aerosol manufacture in England, but suggested that questions on purchase tax should be directed to the Chancellor of the Exchequer. He declared that his group had received no evidence that the purchase tax on domestic sales has adversely affected exports.

•

Houbigant Buys Jaquet

Houbigant Sales Corp., New York aerosol perfume marketer, last month announced the acquisition of the exclusive "Jaquet" cosmetic treatment line. According to Pierre Harang, Houbigant president, the line will continue to be marketed through a small group of better stores. The "Jaquet" line includes a number of facial beauty products, lubricating creams, eye preparations, etc.

•

Israel Seeks Propellant

L. Kardos, 3 Frug Street, Tel Aviv, Israel, has announced that he seeks an agency on an exclusive basis for propellants and refrigerants.

Hydrofluoric Unit Planned

Stauffer Chemical Co., New York, last month announced plans for the construction of a large hydrofluoric acid plant at Louisville, Ky. The new plant will be located next to Stauffer's Louisville petrochemical plant, which currently produces methylene chloride, carbon tetrachloride, chloroform, hydrochloric acid, and perchlorethylene.

Hydrofluoric acid is used in the manufacture of conventional liquefied gas aerosol propellants, as well as for aviation gasolines, rocket propellants, and other chemical uses. Hans Stauffer, president of the company, said the decision to construct the new plant was based on a rapidly expanding demand for this important industrial chemical.

•

Aerosol Research to England

Aerosol Research Co. (Great Britain) Ltd., has been incorporated in London for the design, manufacture, and sale of aerosol valves. The company will maintain an office in Room 150, 20 Copthall Avenue, London EC 2.

International Trade Fairs Scheduled for 1958

The following is a list of international trade fairs and exhibits to be held abroad in 1958, many of which either have had aerosol exhibits in the past or have them this year. Further information may be obtained by writing to the Trade Development Division, U. S. Dept. of Commerce, Washington 25, D. C., or to a consulate of the country in which the fair is to be held.

AUSTRIA
International Spring Fair, Vienna, March 9-16.
International Fall Fair, Vienna, Sept. 7-14.

BELGIUM
Universal and International Exhibition, Brussels, April 17-Oct. 19.
International Trade Fair, Liege, May 10-26.
International Trade Fair, Ghent, Sept. 6-21.

BRITAIN
Chemical and Petroleum Engineering Exhib., London, June 18-28.
British Fair of Industry and Commerce, Manchester, July 4-19.

CANADA
Canadian Hardware Show, Toronto, Feb. 10-13.
International Trade Fair, Vancouver, May 1-10.
International Trade Fair, Montreal, May 30-June 8.
Canadian National Exhibition, Toronto, Aug. 22-Sept. 6.

DENMARK
International Copenhagen Fair, Copenhagen, March 21-30.

FRANCE
International Trade Fair, Paris, May 10-26.
European Fair, Strasbourg, Sept. 6-21.
International Trade Fair, Marseilles, Sept. 13-29.

GERMANY
International Fair, house goods, hardware, Cologne, Feb. 28-March 3.
Frankfurt International Fair, Frankfurt, March 2-6.
German Industries Fair, Hanover, April 27-May 6.
International Trade Fair, Saarbrucken, April 18-May 1.
Int'l Trade Fair, house goods and hardware, Cologne, Sept. 5-8.
Frankfurt International Fair, Frankfurt, Sept. 7-11.

ITALY
International Samples Fair, Milan, April 12-27.
International Trade Fair, Trieste, June 22-July 6.
International Technical Exposition, Turin, Sept. 25-Oct. 5.

JAPAN
Int'l Trade, Industrial Fair, Moji City, March 20-May 25.
*Japan International Trade Fair, Osaka, April 12-27.

LUXEMBOURG
International Trade Fair, Luxembourg, May 24-June 8.

NETHERLANDS
International Trade Fair, Utrecht, March 18-27.
International Trade Fair, Utrecht, Sept. 2-11.

SPAIN
International Samples Fair, Valencia, May 1-20.
International Samples Fair, Barcelona, June 1-20.

SWEDEN
Int'l Swedish Industries Fair, Gothenburg, May 10-18.

SWITZERLAND
Swiss Import Exhibition, Zurich, May 30-June 8.

Alpine Names Newman

Edward J. Newman has been appointed Eastern sales manager of Alpine Aromatics, a company announcement reported last month. Formerly with Johnson & Johnson, Mr. Newman joined Alpine two years ago. His new duties will include sales in both the industrial and cosmetic fields.

•

Monroe-Danford Moves

Monroe-Danford and Co., for the past two years a partnership, last month announced its incorporation under the laws of New Jersey. The company represents several companies providing various packaging items (including aerosol cover caps) to the cosmetic, pharmaceutical, and household specialties industries.

Donald M. Shaw will serve as president of the newly incorporated firm and Maxwell D. Smart as secretary-treasurer. At the same time Monroe-Danford announced that its main office, previously located in Lincoln Park, would now be located at 50 48th Street, Weehawken, N. J., Telephone number is Union 6-1277.

•

TGA Lists Spring Meetings

The Toilet Goods Association, New York, last month announced a schedule for its annual spring meetings. First of the meetings will be the Spring Luncheon at New York's Waldorf-Astoria May 22, followed by a meeting of the TGA's Scientific Section, also at the Waldorf-Astoria.

The association will hold its annual convention June 25-29 at the Poland Spring House, Poland Spring, Maine. A tentative activities schedule has already been announced for the convention.

•

Schmitt to Town Committee

Theodore Schmitt, executive vice-president of Peerless Tube Co., Bloomfield, N. J. aerosol container manufacturer, last month was appointed as one of a three-member industrial committee for West Milford, N. J. The committee will study the industrial potential of the township and institute steps to invite new industries there.

Chromatography a Subject at Canners' Meeting

VAPOR-PHASE chromatography, infrared spectroscopy, and other scientific papers highlighted the technical program of the 51st convention of the National Canners Association, held Jan. 20 in Atlantic City, N. J. Papers on these two subjects were presented at the research luncheon of the association.

I. S. Fagerson, of the Department of Food Technology, University of Massachusetts, called gas chromatography a good bet as the instrument for process monitoring in the food industry and in other industries. (It is at present being used extensively for aerosol research.) He described the working of a gas-liquid chromatograph, and said it has four basic parts:

"1. a sampling system for introduction of the gaseous or liquid sample into the instrument.

2. The chromatographic column.

3. The detector.

4. The recording system."

He described the basic operation of the instrument as follows:

"In operation a measured sample of gas (0.1 to 25cc) or liquid (1 to 50 ul.) is introduced via a heated sampling system into a stream of carrier gas (usually helium, though other gases such as nitrogen and hydrogen can be used). The volatilized mixture is then swept into a column packed with the system's stationary phase. The latter consists of inert particles such as Celite or kieselguhr which have been coated with a film of a high boiling liquid such as silicone oil, dinonylpthalate, polyethylene glycol, in fact even the household detergent "Tide" has been successfully employed. The Celite or fire brick serves only as a support and to provide a large surface.

"In passing through the column, the components of the sample are distributed between the liquid stationary phase and the mobile gas phase. Since the rate of travel through the column depends upon whether the distribution or partition of each component favors the mobile or stationary phase, each component leaves the column at a different time. Thus, each is subsequently carried through a detector or sensing device in its order of emergence. The variation in output of the detector (usually a dual thermal conductivity cell) is plotted by the recording potentiometer as a series of symmetrical peaks, each peak corresponding to a separated component. The area under the peak is a measure of the mol-per cent concentration. The location of the peak in time from the start of the analysis is called the retention time or T_R. This T_R value or time required for a component to pass through the column is constant for a particular set of experimental conditions (such as stationary phase, carrier gas, column length, rate of flow of carrier gas and temperature) and can be used for identification of components. Obviously, reference values can be obtained with known compounds under the same operating conditions. In the event the compound is not known, it can be

(*Continued on Page 74*)

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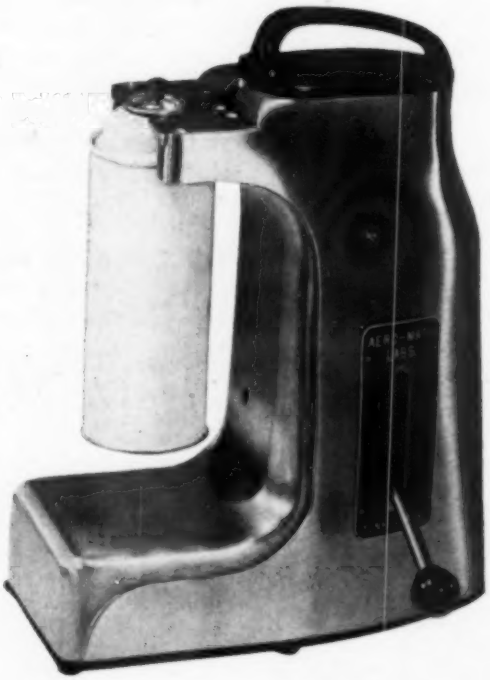
The new *Non-Destructive* method of seal testing.



- In laboratories for quality control and product development.
- To detect potential leakage resulting from poor crimp.
- Will reveal defects of can or valve seat.
- For spot check on production lines.
- To assist in setting crimping heads.

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- What gas can do—blanketing, aerosols, quick freezing, chemical processing.
- How to avoid perceptible changes in flavor—mixtures—solubility—temperature and pressure.
- Side by side comparison of physical properties of 10 gases.
- Factors to consider in choosing a gas.
- Things to remember in storing and handling gases.
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"FACTS ON GASES used for Food Products," Airco's brand new booklet, brings together for the first time—the broad technical facts on gases used and usable with foods. You will learn new ways processors and packers are creating markets and making new profits. And you will also learn of the newest developments in this rapidly growing field.

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SCC Hears Dermatologists, Announces February Program

The New York Chapter of the Society of Cosmetic Chemists, at its first dinner meeting of the year, held Jan. 15 at the Park Avenue Brass Rail Restaurant, heard Dr. Norman Orentreich, a research and clinical dermatologist, describe some recent studies on baldness. Chief of the Hair and Skin Section of the Skin and Cancer Unit of the Graduate Medical School, New York University-Bellevue, Dr. Orentreich concentrated on two general types of baldness: the rapid, partial, or total type and the slower "pattern" baldness common to males.

The guest speaker at the next meeting of the SCC on Feb. 5 was announced as Dr. Paul Becher, project leader in surface chemistry at the Central Research Laboratory of the Atlas Powder Co. He will speak on "The Effect of the Nature of the Emulsifying Agent on Emulsion Inversion," discussing the significance of the type and concentration of the emulsifying agent in determining the precise concentration of oil phase and water phase at which the emulsion will invert from oil-in-water to water-in-oil or vice-versa. By varying the water: oil ratio of an emulsion through a full cycle, the range of phase concentrations in which a particular type of emulsion is stable can be established for a given emulsifying agent.

•

Revlon Buys Knomark

Revlon, Inc., New York cosmetic marketer and manufacturer, last month acquired the Knomark Manufacturing Co., Inc., Brooklyn, largest national marketer of pressurized shoe polishes and other products. Knomark's product line also includes one of the largest selling conventional shoe polishes, "Esquire," plus shoe shine kits and 50 similar items.

This is the first acquisition by Revlon outside the cosmetic and drug field. Last year the company expanded into proprietary and ethical drugs through formation of Thayer Laboratories.

According to Charles Revson, Revlon president, purchase of the Knomark organization was for cash. He said the purchase was in line with the company's decision to diversify and expand in the area of staple packaging goods outside its own recognized field.

Knomark, a privately-owned concern, was founded in 1927. It will be operated as one of Revlon's wholly-owned subsidiaries; and, according to Mr. Revson, present operating policies and executive personnel will be retained.

•

Air Reduction Names Two

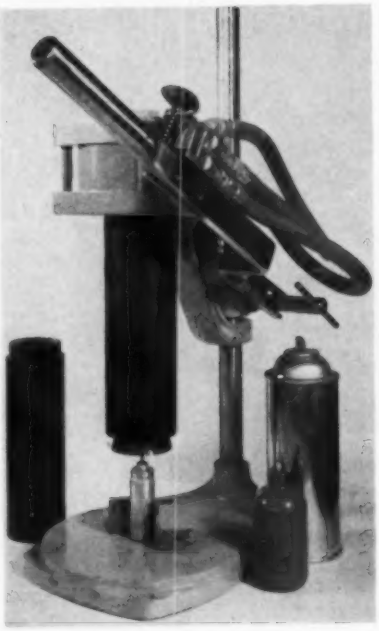
Two personnel changes in its New Orleans district have been announced by Air Reduction Sales Co., New York, a major producer of industrial gases. To be district manager Air Reduction named S. A. Bruno, replacing L. F. Bruno, who retired after 38 years of service. To be assistant sales manager the company named F. T. Wilson Jr., formerly a salesman in the Louisville, Ky. district.

SIMPLIFY LABORATORY PROBLEMS WITH THE

mojonnier

TWO-IN-ONE AEROSOL VALVE LAB CRIMPER

CRIMP BOTH CANS AND BOTTLES ON ONE MACHINE BY JUST CHANGING COLLET HEADS



This new aerosol laboratory development lets you test formulations in cans, bottles or the new aluminum tubes. Now with this one compact unit you can crimp most aerosol valves. For cans with the standard 1" rim and the largest aluminum tube . . . insert the can collet, for glass the bottle crimper head with an appropriate collet.

Compact, air operated and simple to change for every use! Crimper heads accept the same collets used on standard Mojonnier production equipment. Available for cans only . . . for bottles only . . . or for both cans and bottles.

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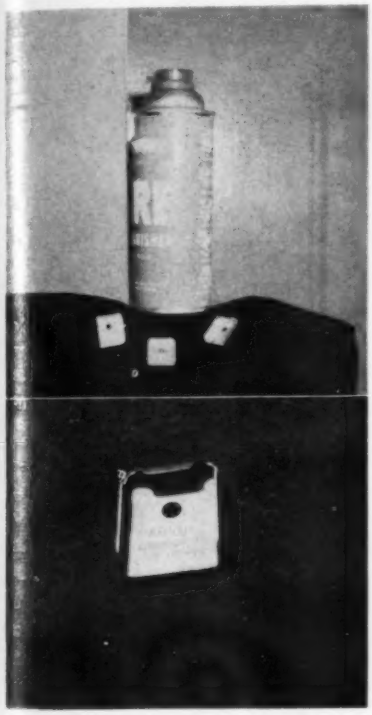
Equipment—Processes—Bulletins—

Aerosol Can Holder

The "Carroll Can Holder", a metal clasp to hold aerosol cans either to a wall or to a display rack, has been



announced by Lorac Industries, 96 MacArthur Lane, Tarrytown, N. Y. The holders can be used to make up complicated spray racks for paints, insecticides, and other products simply by tacking them to a flat surface and hanging the cans. They also may be used for conventional cans in order to make up mixed aerosol and non-aerosol displays.

•

Ohio Chemical Nebulizer

A new nebulizer that generates particles in the effective therapeutic range of .5 to 3.0 micra, and does so at flow rates as low as 3.2 p.m., has been announced by the Ohio Chemical and Surgical Equipment Co., a Division of Air Reduction Co., Madison, Wisconsin.

Air or oxygen may be used as the propelling medium for the unit, which is equipped with a special tubing reducer to allow use with either small, smooth bore, or large corrugated inhaler tubing. The nebulizer may be attached directly to a flowmeter or to supply tubing leading from a wall outlet. Maintenance requirements have been minimized by eliminating the loose gasket, and a removable liquid strainer guards against obstructions becoming lodged in the liquid nozzle.

•

Aeratom Filling Equipment

A new filling machine, using neither a float-gauge nor electricity, has been developed by Aeratom AC, Rapperswil, Switzerland. The equipment operates by a pneumatic control which reportedly does away with inaccuracies due to the natural inertness of the float-gauge and to differences in its specific gravity because of changes in pressure.

The new equipment is said to operate on a high scale of accuracy because of its lack of dependence on a float gauge, and the elimination of electricity makes it possible to fill flammable gases, such as propane and butane, without danger.

Dr. Honisch declares: "These so-called 'pre-filling' machines can be coupled with the valve sealing device, permitting the worker to fill the active ingredient and to fit the valve onto the container in one working operation. Since the machine works pneumatically, a compressor is needed for operation. The latter should be installed in an adjoining room so as to keep motors out of the working area. Thus it is possible to handle such flammable gases as butane, propane, ethyl chloride, etc., without danger."

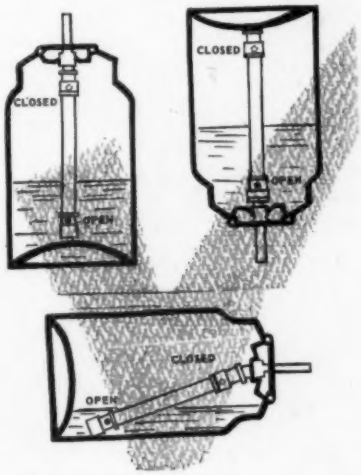
•

New Chrome Protector

"Aerosol Britect", a product designed to protect chromium plating, brass, silver, etc., against tarnishing, is a new aerosol introduced by Douglas Holt, Ltd., New Addington, England. It is claimed that the spray remains transparent without yellowing, oxidizing, cracking or blistering. It retails at $1.19.

New Aerosol Valve

An aerosol valve that will operate equally well from any position has been developed by USDA's *Agricultural Research Service*, the department's periodical, reported recently. The valve was developed by R. A. Fulton, Agricultural Research Service chemist, and there has been a public patent applied for it to make the design available to manufacturers.



The valve operates by use of a slide which functions in much the same way as does a steam locomotive piston. The dip tube has a hole drilled into each end, and over each hole is fitted a sliding porthole. Depending upon the position of the can, this sliding porthole opens or closes the hole in the tube. A glass bead may also be used inside each end of the tube to open or close the tube. The tube can be copper, steel, tin-coated steel, nylon or polyethylene, depending upon the product to be packaged.

The periodical reports that, no matter in what position the can is held, there will always be a discharge of the product — not the gas.

Aerosol Testing Blotters

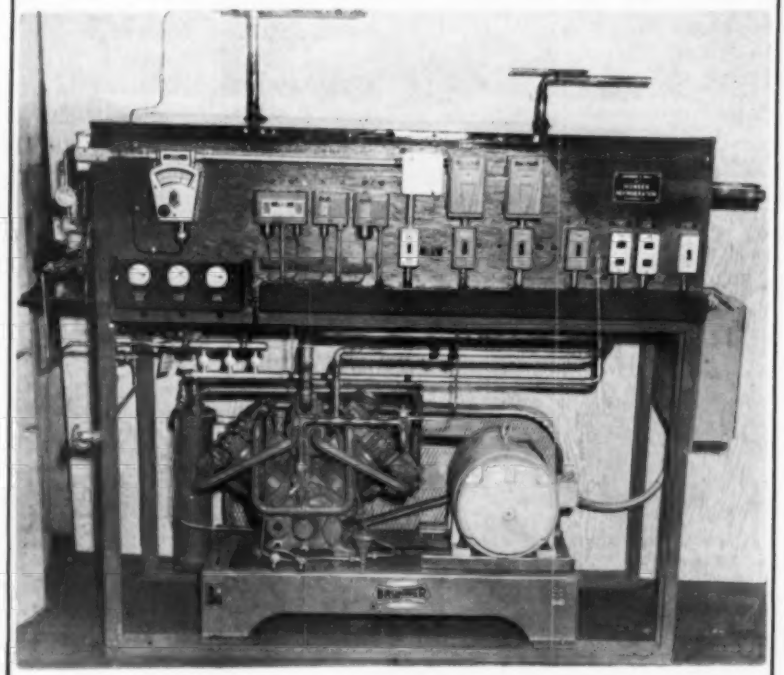
Ungerer & Co., New York, has introduced a professional aerosol testing blotter which can be used to evaluate fragrances and to determine spray patterns. The blotters, which come in pads three inches by five inches, are held in a horizontal position just under the valve orifice. They fill the need for easier and more accurate testing of aerosol formulations.

The blotters were developed by research chemists of Ungerer & Co. working in conjunction with Frank Orlandi, New York printer. Samples are available by writing directly to Ungerer at 161 Avenue of the Americas, New York 13.

•

ICI Exhibits Containers

Imperial Chemical Industries, Ltd., London, recently held an exhibit showing a wide variety of containers used to package chemicals. A feature of the exhibit, which was held in the theater at Imperial Chemical House, London, was a display of polythene aerosol containers.



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Leak Detection Method

A new leak detection method for a pressurized system now in use, in which nitrous oxide is used in conjunction with infra-red analyzers, has prompted the release of a "Nitrous Oxide Technical Information Bulletin" by Ohio Chemical and Surgical Equipment Co. (A Division of Air Reduction Company, Inc.), Madison, Wis.

This bulletin is the first in a series planned by Ohio Chemical to supply industry with pertinent technical data on chemical, physical and pharmacological properties of nitrous oxide. In addition, results from tests showing the non-toxic and non-corrosive characteristics of this gas are included.

The automotive industry is presently applying the nitrous oxide leak detection method in testing their new air suspension systems. Other types of systems in which pressurized vessels are to be tested for leaks can readily adapt an already proven technique. For further information write for Form IA, Ohio Chemical and Surgical Equipment Co., 1400 East Washington Ave., Madison 10.

•

D&O Spray-Dried Perfumes

The product development laboratories of Dodge & Olcott, Inc., New York, last month announced the availability of practical locked in perfumes, christened "Fragrance-Seal." These new materials, the result of new techniques in spray drying and formulation, are said to have indefinite shelf-life. They are reported to be easy to handle, economical, and "truly representative of the liquid perfume used in their manufacture."

Samples of the "Fragrance-Seal" perfumes are available for manufacturer testing from the company at 180 Varick Street, New York 14.

•

New Air Freshener

Walter Dickinson & Co., Ltd., Toronto, has introduced a new line of aerosol air fresheners designed for office and factory use. Called "Trend," the ten-ounce container is being marketed through leading stationery and office equipment firms across Canada.

Gilbert's New Closure Line

A complete line of plastic closures for standard aerosol cans is being manufactured by Gilbert Plastics, Inc., Hillside, N. J. Constructed of medium impact polystyrene, Gilbert "Stack Caps" are available from stock for immediate delivery in bright red, yellow, white, black, lavender and green. Other colors can be made to specifications, and tops can be engraved with names or symbols. Samples and prices furnished on request.

•

New Emson Folder

Emson Research, Inc., Bridgeport, last month issued a new descriptive folder illustrating and describing in detail the company's line of valves and aluminum and stainless steel containers. In addition to cross-section drawings of the valves in various models, a number of applications for both the basic and the metered valve are shown.

Copies of the folder may be obtained by writing to the company at 118 Burr Court, Bridgeport 5, Conn.

•

Filling Machine Manual

Hope Machine Co., Philadelphia, has announced the availability of a new operating manual for two-line filling machine Type 19S, just released. The manual is being offered as part of Hope's program of seeking better ways to serve the packaging industry.

The 8½" x 11", 36-page booklet contains 16 exploded view drawings, detailed operating instructions and points on maintenance, plus a parts list. Possible sources of trouble are covered, with recommendations for handling such problems. Firms packaging liquid or viscous type products, Hope reports, will be better able to visualize the success they might obtain with the 19S unit, through careful study of the booklet.

Requests for the manual should be addressed to the company at 9400 State Road, Philadelphia 14, Pa.

•

New Lanolin Derivatives

American Cholesterol Products, Inc., Edison, N. J., last month announced first commercial production of two new types of lanolin derivatives. Called "Solulans" and "Ricilans," both products are recommended for use in aerosols, hair products, and other cosmetic uses.

The "Solulans" are new polyoxyethylene derivatives of lanolin. They are 100% active, non-greasy, clear liquid products with complete solubility in water, alcohol, many oils, and solvents. They produce persistent emollient films, and solubilizing properties which are said to lend themselves to the creation of new effects in cosmetics, pharmaceuticals, and other aerosol formulations.

The "Ricilans" are hydrophobic viscous liquid waxes composed of polymeric hydroxyesters derived by synthesis from the natural substances, lanolin and castor oil. They are 100% active emollients, penetrants and spreading agents which are said to offer unusual benefits when applied to skin and hair.

Data sheets including typical analyses and suggested uses for both these materials are available by writing directly to the company at Amerchol Park, Edison, N. J.

•

New Aerosol Defroster

An aerosol windshield defroster has been introduced by Katona Chemical Co., Bridgeport. Composed of alcohol-type chemicals that lower the freezing point of water, the new product, called "De Ice," is sprayed lightly over the frosted windshield from the aerosol container. Within three minutes, a sixteenth-inch thick coating of ice will melt away.

MAKE YOUR PRODUCTS EASIER TO USE

AND YOU MAKE THEM EASIER TO SELL

TMC®

55, 75, 132 CU. IN.
240 LBS.
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KING SIZE
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INCREASE SALES

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Gasketing Company Now in Full Production

From a few thousand per week to millions of gasketed aerosol mounting cups has been the remarkable progress record achieved by Handy Button Machine Co.

The company has engineered and constructed all the machinery and tools required to build up this large department of its business over the past four years. It is currently supplying many of the country's leading valve manufacturers.

Handy Button is a 60-year old concern, specializing in light metal stampings and assemblies. It operates in a modern one-story factory, has facilities for large-scale economical production, and is enlarging its capacity to handle the growing demand for gasketed mounting cups.

•

"Achromycin" for Acne

"Achromycin" lotion is proving effective in the treatment of acne, Dr. Lester Hollander, of the Pittsburgh Skin and Cancer Foundation reported recently. "Achromycin", a product of Lederle laboratories, is one of the first topical drugs used in aerosol form. Dr. Hollander reported that a majority of the test cases showed favorable results after application of the drug in lotion form.

•

D&O Flavor Development

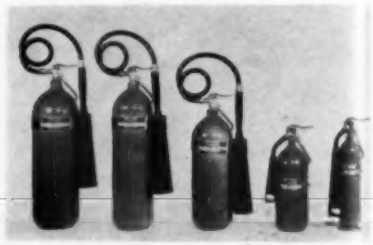
"Flavotang", a new flavor intensifier recommended for use in processed and frozen food products, is available in several forms containing varying amounts of monosodium glutamate, a blend of spice extractives, on a carrier (either dextrose or salt), it was announced last month by Dodge & Olcott, Inc., New York.

The company points out that specific usage will vary with the end product and particular flavor character desired, and recommends that the manufacturer arrive at his own level of use through trial. Generally excellent results are reported within a range of a six to 12 ounces in a hundred pounds of finished product.

•

New Nozzle Design

A newly designed discharge device is now provided on five American LaFrance carbon dioxide fire extinguishers to give



added protection against Class B and C fires. In addition, each carries the new Underwriters Laboratories ratings.

With the new design, nozzles have five orifice holes. The usual opening in the center of the nozzle discharges parallel with the taper of the horn. The other four openings are placed around the nozzle, 90° apart from each other. Discharge from these four is at right angles to the side of the horn. This placement enables the snow to break into minute particles, giving almost instant change from snow to gas.

This new concept in carbon dioxide fire fighting gives faster and more effective extinguishment of the fire and eliminates much of the punishment an operator takes when putting out a fire with ordinary CO_2 extinguishers.

Models equipped with new nozzles are 2½, 5, 10, 15 and 20. Models 5 and 15 are also Coast Guard approved. For large blazes beyond the capacity of hand portable units, CO_2 Wheeled Engines are available in 50, 75 and 100 lb. sizes. For further information write to American LaFrance Corporation, Elmira, New York.

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JG'S MODEL 14B NITROGEN GASSING MACHINE CAN HANDLE THE JOB!

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For conventional pressure filling of king-size containers and standard-size closures:

Model 14-A
- 0 to 300 cc. capacity
- Up to 30 injections per minute

Model 14
- 0 to 300 cc. capacity
- Accurate within ± 75% on injections down to 5 grams

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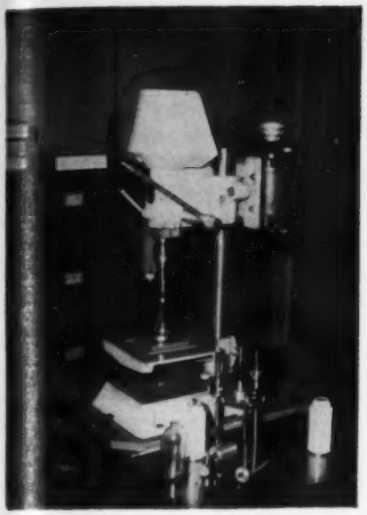
New Drill Press Capper



A new combination drill press capper for aerosol bottles and cans has been announced by Builder's Sheet Metal Works, Inc., New York. The unit, which can even be used as a drill press when not being used full time in aerosol production, has a height of 30 inches and measures 14 x 24 inches at its base.

It can be operated at a production rate of two bottles per minute or eight cans per minute. A foot switch is included for use when the bottle capper is being used.

•

FDA Rules on Whipped Cream

The Federal Food and Drug Administration recently ruled that "the unqualified name 'whipped cream' should not be applied to any product other than one made by whipping the cream, that complies with FDA standard of identity for whipping cream." "If flavoring or sweetening is added, the resulting product is a flavored and/or sweetened whipped cream, and should be so identified."

•

Nitrous Oxide Booklet

Ohio Chemical & Surgical Equipment Co. (A Division of Air Reduction Co., Inc.), Madison, Wis., has released a technical service bulletin on the application of nitrous oxide in pressurized packaging of food and non-food products, in response to numerous inquiries for such information.

The Ohio bulletin supplies data on the chemical, pharmacological and physical properties of nitrous oxide. Tables show a solubility comparison of nitrous and other gases in water, sugar solutions, and in edible fats and oils.

The information given was obtained from literature and is supported by the experience Ohio Chemical has gained in the manufacture of high purity nitrous oxide during the past 45 years. The bulletin also contains a reference list of other sources for information on nitrous oxide.

Copies of the bulletin may be had by requesting Form GP-1 from the Company at 1400 East Washington Ave., Madison 10, Wis.

•

Aerosol Film Available

The CSMA last month announced the availability of its new aerosol movie, "The Magic Button," for individual company use. The association points out that the film is ideally suited for sales promotion, showings to civic organizations and clubs, and as educational entertainment for schools.

The film runs six and one-half minutes and comes in color or black and white prints. It is 16 mm. Color prints are available to subscribers to the association's aerosol public relations fund at $60 per print, and to others at $80. Black and white prints are available at $30 per print to fund subscribers and $40 to others. Application should be made directly to the CSMA, 50 East 41st Street, New York.

•

Award Nominations

A new closing date has been announced for recommendations for the 1958 annual awards of the Packaging Institute for "Outstanding contributions to packaging technology." This year's recommendations, covering the corporate as well as the professional award, must be received by the Packaging Institute no later than April 1, it was announced last month by Roger V. Wilson, Continental Can Co., chairman of the awards committee.

Application forms and award brochures are available to anyone in the packaging industry from the institute at 342 Madison Ave., New York 17.

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QUALITY CONTROLLED—Every shipment laboratory tested for crack resistance

- Ideal for aerosols, atomizers, squeeze bottles and lotion pumps
- Odorless, non-toxic, resistant to most filler and propellant chemicals, crack resistant through exclusive formulation of materials
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Low-Toxicity Insecticide Announced by USDA Researchers

A new type of insecticide, made from derivatives of chrysanthemumic acid, has been discovered by USDA chemists at Beltsville, Md. Results of limited toxicity tests with the new compound, which is made with esters of chrysanthemumic acid made with 6 bromo piperonyl alcohol and 6 chloro-piperonyl alcohol, have justified application for a public service patent on these materials, it is reported.

Chrysanthemumic acid is a synthetic material similar to an acid found in flowers of the chrysanthemum family. This particular acid makes up part of the molecules of pyrethrum and allethrin, and acute oral toxicity tests on warm-blooded animals have revealed the new insecticide to be only one-eighth as toxic as pyrethrum and one-third as toxic as allethrin.

In the preliminary laboratory tests on insects, two of the new compounds were shown to be equal or better than either pyrethrum or allethrin at high levels of kill, though somewhat slower in knockdown. Both were less effective as insect killers than DDT and other hydrocarbons, all of which may leave toxic residues. However, the new materials gave good results against larvae of the common malaria mosquito, the codling moth, the salt marsh caterpillar, and the southern army worm. They were also highly effective against the body louse.

The new compounds were developed by USDA chemists W. F. Barthel and B. H. Alexander. In their work to find compounds of low mammalian toxicity, Messrs. Barthel and Alexander synthesized approximately 200 esters of chrysanthemumic acid. Five of these are reported to have shown promise, and two rated higher than all the rest in preliminary tests.

The two best esters of chrysanthemumic acid were made with 6 bromo-piperonyl alcohol and 6 chloro-piperonyl alcohol. These esters, while considerably more expensive than DDT and other chlorinated hydrocarbons, can be made at lower cost than allethrin.

Development of an even lower toxicity insecticide, it is pointed out, would further open up the field for aerosol insecticides for home, hospital, food processing and similar uses.

•

Aerosol Medical Spray

The Columbia University College of Physicians and Surgeons, New York, have announced development of an aerosol spray that enables patients to cough up sputum for microscopic examination for lung cancer.

The scientists, Drs. Alvan A. Barach, Hylan A. Bickerman, and Edith A. Sproul, used a nebulizer containing a warm salt solution with propylene glycol. 86% of the test cases responded to the spray by producing sputum. The aerosol spray was developed after study of human lung tissue reactions to solutions of varying temperatures, containing fine particles of various sizes and densities, under a number of vapor pressures and with regard to the rate and depth of breathing.

Introducing . . .

A Combination Drill Press Capper for Aerosol Bottles and Cans

Left: setup for capping cans (motor not used)

Right: setup for capping bottles (motor used)

Dimensions: base size 14" x 24" height 30", 110 volt ac ¼ hp motor.

Production rate approximately 2 per minute with aerosol bottles — 8 per minute with aerosol cans.
May be used as a drill press where aerosol production does not use it full time.
Foot switch included for use when capping bottles.

Aerosol bottle capper price ..... $208.00 *Attachment for capping cans* $160.00

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Ethylene Oxide Studied for Aerosol Uses

AN aerosol method of sterilizing sensitive materials—those which cannot stand treatment by steam, dry heat, or liquid chemicals—has been developed by USDA scientists at Beltsville, Md., working under contract with the U.S. Army Chemical Corps. Biological Warfare Laboratories, Fort Detrick, Md.

The research is reported to have indicated that ethylene oxide, a highly flammable germicide and insecticide, can be combined with aerosol ingredients to make sterilant formulations that are safe for use. The new formulations are the result of special studies by the aerosol project group of the USDA's Entomology Research Division at Beltsville. Chemists E. O. Haenni, W. A. Affens, H. G. Lento, and George Mangan conducted the research under the supervision of Dr. R. A. Fulton.

Although ethylene oxide has long been used as an insect fumigant and has been known to have sterilizing properties, the compound's flammability had hitherto presented a serious fire hazard. However, by combining it with proper amounts of commonly-used aerosol propellants, the USDA chemists have been able to formulate safe, nonflammable mixtures.

Research on limits of flammability showed that the ethylene-oxide content should not exceed 12% by weight when combined with dichlorodifluoromethane (propellant 12). A limit of 11% of ethylene oxide by weight has been established for mixtures of propellant 12 and tricholorofluoromethane (propellant 11). Within these established limits, it is reported, repeated tests have established the safety and effectiveness of the formulations.

The government has applied for public service patents covering these sterilants, and the formulas have been released for commercial manufacture. Manufacturers must register their products under the Federal Insecticide, Fungicide, and Rodenticide Act.

These sterilants have been produced in aerosol cans similar to those used for insecticide sprays. The can may be connected to an air-tight enclosure, such as an autoclave, in such a way that its top is punctured. Pressure within the can forces ethylene oxide gas into the enclosure, effectively sterilizing the contents in four to eight hours.

Formerly, ethylene oxide was mixed with carbon dioxide to reduce its flammability, but this mixture is reportedly not as effective as the new sterilants, which can safely contain a larger volume of ethylene oxide. More importantly, they do not produce as much pressure as the older mixture. This means that the new products can be packaged in lighter containers, which USDA has developed.

Ethylene oxide is a highly effective means of sterilizing materials that are too sensitive for heat or other chemical treatment. It can be used for photographic film, clothing, delicate balances, and pharmaceutical products. It is so highly penetrative that it will sterilize the pages of a closed notebook.

Army chemical corps scientists at Fort Detrick now use the new mixture routinely to sterilize materials that have been exposed to pathogenic bacteria. They have also devised special applications for the mixture for such purposes as sterilization of packaged foodstuffs in truck vans, which could be used by military or civil defense authorities in an emergency. They have also used ethylene oxide to decontaminate a commercial airplane in which live polio virus was accidentally spilled.

Samples of the ethylene-oxide formulations have been made available to USDA's Animal Disease Laboratory at Plum Island, New York, where foot-and-mouth disease investigations are conducted. Preliminary tests of the compounds at Plum Island have shown promising results in sterilizing materials contaminated with foot-and-mouth disease virus. If further tests prove successful, researchers at the

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laboratory will use ethylene oxide in autoclaves and specially designed fumigating chambers to sterilize instruments such as microscopes, delicate scales, and telephone sets, which cannot be sterilized by steam or liquid chemicals.

•

NSSA to Meet in New York

New developments in sanitary chemicals, including new aerosol products, will be highlighted at the 35th annual trade show and convention of the National Sanitary Supply Association. The show will be held at the New York Coliseum Feb. 22-25 and by last month there were 181 manufacturers and distributors listed as exhibitors.

Among the firms in the aerosol industry listed for displays are: Aerosol Corp. of the South, Airkem, Inc., B. T. Babbitt Inc., Colgate-Palmolive Co., E. I. du Pont de Nemours & Co., Hysan Products Co., S. C. Johnson & Son, O-Cedar Division of American Marietta Corp., and Whitmire Research Laboratories.

Babbitt Names Ad Agency

B. T. Babbitt, Inc., New York, late last month announced the assignment of its advertising account to Brown & Butcher, Inc., New York agency. Billings on the account are estimated at $1.8 million.

According to *The New York Times*, which quotes "trade rumours," the move to the new agency represents "a reunion of several executives who first became acquainted through servicing the Colgate accounts." The Brown agency had handled $3 million of the Colgate account, and Marshall Lachner, Babbitt president, was a vice-president of Colgate's Soap Division.

•

Canco Buys Marathon Corp.

American Can Co., New York, recently announced the acquisition of Marathon Corp., Menasha, Wis. producer of pulp, paperboard, and fabricated products. Under terms of the agreement, which involved an exchange of common stock, Marathon became a division of Canco.

—Convention Calendar—

American Society of Perfumers, 4th annual symposium,
Essex House, New York, N. Y......March 20

Packaging Machinery and Materials Exposition, *Atlantic City, N. J.*.....March 25-28

American Pharmaceutical Manufacturers Association,
Boca Raton Club, Boca Raton, Florida.....April 14-16

Chemical Specialties Manufacturers Association, 45th Mid-Year Meeting,
Netherland Hilton Hotel, Cincinnati, Ohio.....May 19-21

American Management Association Packaging Conference,
Hotel Statler, New York, N. Y......May 26-28

National Packaging Exposition (American Management Association),
Coliseum, New York, N. Y......May 26-29

Toilet Goods Association, Scientific Section,
Waldorf-Astoria Hotel, New York, N. Y......June 5

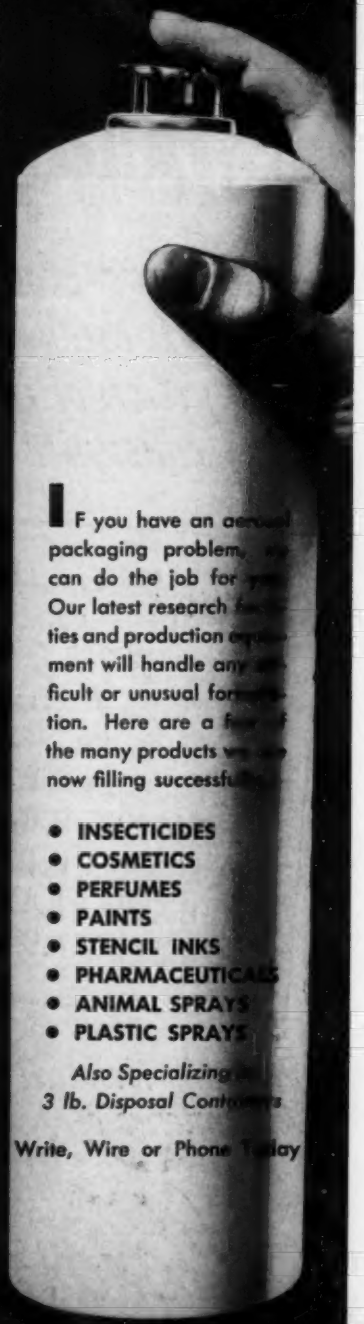
Toilet Goods Association, *Poland Spring House, Poland, Me.*.....June 25-29

Western Packaging & Materials Handling Exposition,
Civic Auditorium, San Francisco, Calif......Aug. 11-13

Chemical Specialties Manufacturers Association, 45th annual meeting,
Commodore Hotel, New York, N. Y......Dec. 9-11

Specialists in Small Run

AEROSOL PACKAGING



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that have proved their effectiveness in the production of industrial and consumer products

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APPLE BLOSSOM...No. 3122
OIL SWEET PEA.... No. 3123
OIL WISTARIA.....No. 3124
OIL GARDENIA..... No. 3125
OIL BOUQUET E.T. No. 3126
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Zurich, Switzerland

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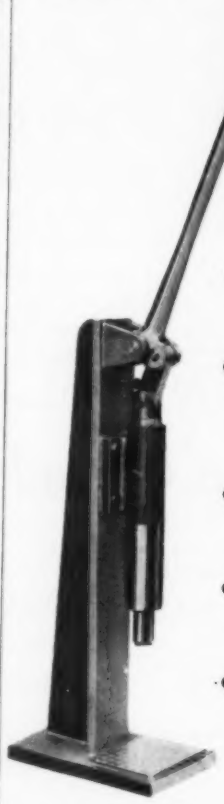

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- Valves (Liquid and) Foam/Cans and Glass Bottles)
- Product Concentrates
- Laboratory Service
- Advice and Consultation

Valve Clincher
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Bottles
DP-104 and DP-104a

All Products manufactured to our own Designs, Formulations and Patents. Valves available from Germany and Italy—Filling Machines from Germany—Laboratory Equipment and Concentrates from Switzerland

Publishers of "European Aerosol Survey," a quarterly periodica

Catalogues and Prices on Request

Who's Who in the Aerosol Industry

Donald S. Tuttle, Jr., sales manager of the Valve Division of The Risdon Manufacturing Co., Naugatuck, Conn., saw his first aerosol package while serving as a Marine dive bomber pilot in the Pacific during World War II. Eight years' later, as Risdon's first valve sales manager, he sold the company's first aerosol valve — a space spray unit for a USDA insecticide. In the five years since then, he has contributed toward making his company a recognized leader in the design and manufacture of quality aerosol valves.

Risdon established its Valve Division in 1952, and back then Mr. Tuttle was a one-man sales staff. Today he coordinates the efforts of more than 20 representatives, both in company offices and independent sales agencies throughout the U.S., and with foreign licensees throughout the world. In 1952 Risdon's customers numbered less than 10, and the valves these customers purchased were destined exclusively for insecticides and room deodorants. In 1957, Risdon sold valves for a wide range of uses to more than 100 product manufacturers.

Mr. Tuttle was active in bringing about the commercial application of the first mechanical break-up actuator for a water-based product, "Jet Spray Bon Ami," and was also instrumental in the introduction and expanding application of the "Micro-Mist" actuator and valve, which today is used primarily in the perfume and cologne field. About this last application of the aerosol principle, he had this to say:

"During 1957, probably about one-third of the colognes and perfumes sold in the United States were aerosol-packaged. If the packaging of fragrances follows the trend set by hair lacquers over the past few years and continues to receive increased promotional support—and there is every indication that it will—40 million colognes and perfume aerosol packages should be sold in 1959. That will be nearly five times the number sold in 1956."

Mr. Tuttle also cited industry estimates that the use of colognes and perfumes however packaged, should increase in the next few years. Where lipstick is a saturation item in the cosmetic field, he said, only half the women who might use fragrance, now do so.

The Risdon sales manager believes that personal demonstration, at the retail counter as well as in the home, is the surest way to sell women on the value of aerosol-packaged colognes and perfumes. The saleswoman who understands and can show her customers why aerosols are so convenient, to use, why they last longer and retain their original freshness, will sell an increasing volume of aerosol packages.

As a Marine pilot, Mr. Tuttle flew 44 combat missions in the Pacific Theater, winning the Distinguished Flying Cross and the Air Medal. He joined Risdon upon his release from service in 1946, and spent the next two years on a training program in all phases of Risdon's manufacturing operations. In 1948 he was appointed assistant to the sales manager of the firm's Wire Specialties Division, and in 1952, when the Risdon Valve Division was formed, Mr. Tuttle became its sales manager.

Geigy Revamps Sales Force

Geigy Agricultural Chemicals Division of Geigy Chemical Corp., Ardsley, New York, last month announced the formation of four sales districts to facilitate nation-wide distribution of its products. The company is a major supplier of DDT and methoxychlor to the aerosol industry.

L. G. Gemmell, assistant to the division president, Dr. G. R. Ferguson, has been assigned to coordinate and supervise the new overall district sales operations. J. J. Hood has been appointed assistant sales manager in charge of technical services.

To head the Eastern sales district, covering the East Coast from Maine to Florida, the company named S. C. LeVasseur, who will operate from Geigy's headquarters at Ardsley. L. C. Ohle will be sales manager for the Southcentral district, which includes Colorado, Nebraska, Missouri, Tennessee, and the states south of these. He will maintain offices in Kansas City, Mo.

The Northcentral district, comprising the northern section of the Midwest farm states, will be under the direction of Haskell Tison at Geneva, Ill. C. L. Turzan, of Fresno, Calif., has been named district sales manager for all states West of the Rockies.

•

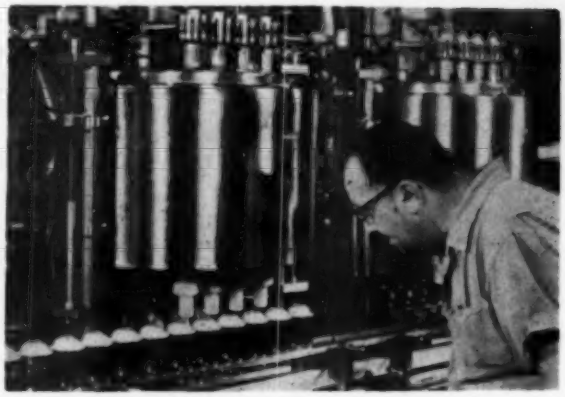
McConnell to Real-Kill

The Real-Kill Co., Kansas City aerosol insecticide marketer, last month named Paul H. McConnell as merchandising manager. He was previously associated with Monsanto Chemical Co.

Mojonnier Announces New Aerosol Movie

Mojonnier Associates, Inc., Franklin Park, Ill., last month released a number of stills from its new movie on aerosol filling equipment. The movie depicts the design, setting up, and operation of a typical aerosol filling line.

Above: After initial design of the line by Mojonnier engineers and draftsmen, the individual units are manufactured and assembled in Mojonnier's tool shop.



Right: Upon completion of the assembly of the units and then of the complete line, the filling equipment is given a test run in Mojonnier's plant.

Left: After installation of the line in the customer's plant, the line is given another test run and then goes into production. The motion picture was shown for the first time at the CSMA convention in December at Hollywood Beach, Florida.

Aerosols and The Economy

(*From Page* 13)

buting factors that could be overlooked in any quick estimation of the future potential of the aerosol market. As was pointed out in this column several months ago, aerosol marketers have "come of age" when it comes to advertising, and can now offer the keenest competition to the marketers of conventional non-aerosol products for the consumer dollar. Also, there is a growing appreciation of the aerosol by businessmen and manufacturers in other industries. This is evidenced by the ever increasing expansion into aerosol product lines by major (and minor) companies which hitherto have expressed only casual interest in forms of packaging other than their own.

Of course, all these generalizations apply to the entire industry picture, and don't rule out sales drops in certain product categories or in those areas of the country that are hardest hit. However, the aerosol industry as a whole should be able to look forward to another good year.

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CUSTOM FILLING . . BUT
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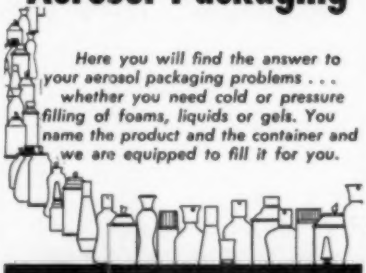

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Soap Assn. Meets

THE need for an intelligent approach to research is mounting year-by-year, declared Charles H. Kline, research director of Shulton, Inc., Clifton, N. J., in an address before the 31st annual convention of the Association of American Soap & Glycerine Producers. Speaking on "Managing Research on a Middle-Sized Budget," Mr. Kline outlined some of the mistakes commonly made in attempting to set up an efficient research program.

"No research program, large or small, can be very successful without well conceived, clear-cut, and realistic objectives. Unfortunately, overzealous research men, consultants, and stock market letter-writers have concentrated too much on the idea of research as a miraculous cure-all for company ills, and spent far too little time defining the type of research that a given company might profitably undertake."

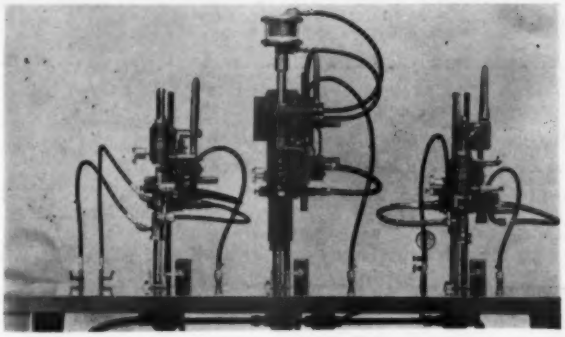
He cautioned that research is not the only means of acquiring new products, processes, or the development of new uses for products. "New products or processes can be acquired by purchase or license or by corporate mergers or acquisitions. New uses can sometimes be developed by a good technical marketing and promotional program."

". . . Company managements and research directors alike must recognize that every research project is a calculated risk. Careful direction and good understanding of the special problems of middle-sized research can reduce the risks, but not eliminate them."

Among the other speakers at the convention was Arno W. Johnson, vice-president and senior economist of J. Walter Thompson Co., New York, who warned that "We must increase our total sales of goods and services to consumers by over 50% within the next ten years if we are to keep pace with our increasing productive ability."

He predicted major difficulties ahead if the 1956-75 slowdown in the rate of growth of the standard of living and the inflationary trends are not soon curbed.

JG Filling Unit Shipped to England



JG Machine Works, Inc., New York, last month shipped a semi-automatic aerosol filling unit to Safca Aerosol Manufacturing, Ltd., Bracknell, England. The unit, consisting of a purger, crimper, and propellant injector, is designed for a hand line which will eventually be connected with an automatic one. Its capacity is 30 units per minute.

CSMA Lists New Members

The Chemical Specialties Manufacturers Association last month issued a list of new active, associate, and foreign members. The list included a number of aerosol marketers, suppliers, and fillers:

Active

Seymour of Sycamore, Inc.

Associate

Ohio Chemical & Surgical Equipment Co.

Foreign

Aerosol Co. of S.A. (Pty.) Ltd., Durban, South Africa

Berner Osakeyhtio, Helsinki, Finland

Fuller Brush Co. Ltd., Ontario, Canada

•

Perfumers to Meet in N. Y.

The American Society of Perfumers last month announced the program schedule for its fourth annual symposium, to be held Thursday, March 20 at the Essex House, Central Park South, New York. The symposium will have "The Perfumer Speaks" as its principal theme.

The program will be divided into four sections and all the speakers will be members of the society. Requests for reservations, which are $12.50 per person, should be addressed to Edwin D. Morgan, Jr., Lever Bros. Co., 101 River Road, Edgewater, N. J. The program is as follows:

Introduction:
Victor DiGiacomo, chairman

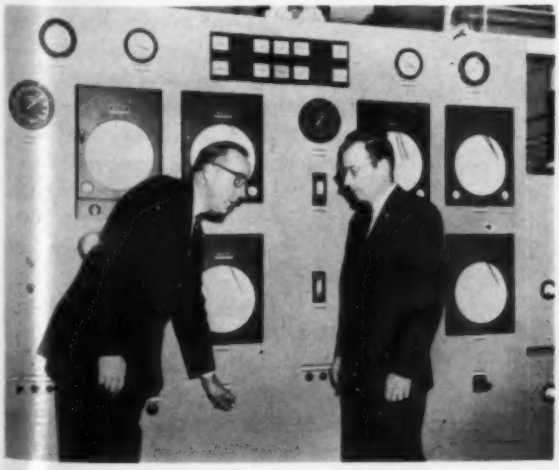
First Section:
The Perfumer and His Creations
Walter Lengsfelder
Ernest Shiftan
Everett D. Kilmer

Second Section:
Cosmetics the Perfumer's Concern
Dr. Oliver L. Marton
Dr. Paul G. I. Lauffer

Third Section:
Packaging Materials Present Perfuming Problems
Christian Wight
Frazer V. Sinclair

Fourth Section:
Perfume, the Ever Present Persuader
Pierre L. Bouillette

Ohio Chem. President Officially Opens New Plant



W. A. Lunger (left), president of the Ohio Chemical & Surgical Co., and Stanley Smith, Cleveland plant manager, formally open Ohio's new nitrous oxide plant in Cleveland. Production capacity of the new plant is 240 million gallons.

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Canners' Convention

(*From Page* 54)

recovered at the exit of the instrument by trapping in a refrigerated bath or in a solvent for subsequent identification by infra-red, mass spectrometry or other means."

Mr. Fagerson warned that with present cells a detectability in the order of 10 parts per million is possible. He said the method is limited to substances with boiling points up to about 400°C, but for most applications practicality limits this upper range to about 300°C. "The temperature limitation is governed by a number of factors, among them the boiling point of the liquid stationary phase, thermal stability of the injected compounds, sensitivity of detector, and loss in resolution of the column at the higher temperature."

He reported that the choice of column material or stationary phase is one of the most important factors in achieving desired separations.

Dr. Abraham Savitsky, of the Perkin-Elmer Corp., Norwalk, Conn. called infrared spectroscopy the "most powerful technique available to the chemist for the rapid identification and measurement of organic chemicals." He outlined various applications for the technique, ranging from testing of margarine to leak testing of an automobile suspension system.★

Publicity Campaign

(*From Page* 34)

release "Aerosol Spray Tames Old Sol" was syndicated to 2700 daily and weekly newspapers all over the U. S. To date, the agency reports, more than 250 clippings were received on this sun-screen item.

Another aerosol product story, a foot refreshener, was syndicated in mat form to hundreds of newspapers in ten Southern states, and this too is reported to have had favorable editorial response.

The agency reported two successful publicity spots—one radio and one television. On Oct. 17 at 8:15 a.m. over WCBS, New York, aerosols were discussed on the "Jack Sterling Show." Also, on Oct. 10 on "Tonight," the Jack Paar Show (WRCA-TV) a fluorescent aerosol was given the Halloween treatment by Jack Paar and Dody Goodman, stars of the show.★

Rexall Drug

(*From Page* 15)

pressed with the aerosol as a means of dispensing, and the sales potential inherent in aerosols caused him to select that type of package more and more frequently for new Rexall products. With installation of the company's own aerosol filling unit (at its big St. Louis plant) it is anticipated that during the next few years more and more aerosol products will be packaged and sold through the Rexall chain.

Coordinator of packaging for the company is John A. Walls, and he works closely with Dr. Henry S. Rudzki, director of the research and product development department. Actual production contact with outside suppliers is handled by F. B. MacNamara and James L. Eagan of the company's St. Louis manufacturing division. Package design is under the direction of Larry Goodwin, Rexall's art director, and packaging copy preparation is under the supervision of Esther Fellows.

The company's appreciation of the aerosol package isn't confined solely to the management and the top product development people. Much basic research and development in aerosol principles is being carried out on a wide scope throughout the company's research department. Also, store clerks in the 10,000 stores seem well briefed on their aerosol product lines, and don't hesitate to advise them over older, more conventional packaged products.

With this top-to-bottom orientation of key personnel, it's little wonder that Rexall Drug Co. is so highly regarded as both a developer and a marketer of an ever widening range of aerosol products.★

DeFeo Visits Argentina

Vincent DeFeo, head of the aerosol testing laboratory of Dodge & Olcott, Inc., New York, and treasurer of the New York Chapter of the Society of Cosmetic Chemists, is currently in Buenos Aires, Argentina. He will remain for several months working with his company's customers there.

Aerosols in Review

(*From Page* 42)

sibilities. "The addition of a co-solvent such as ethyl or isopropyl alcohol will usually promote miscibility."

"For perfumes and toilet waters, the presence of small amounts of glycerin to reduce irritation tendencies on the skin is an advantage. The amount of glycerin may be as low as ¼ to ½% of the total constituents." Mr. Pickthall also advises the incorporation of small amounts of glycerin in after-shave and astringent lotions, as well as in personal deodorants.

"Air fresheners are mixtures of propellant, polyhydroxy compounds and special deodorizing chemicals. The latter are usually included in the perfume. To a large extent their efficiency depends upon the fine particle size in the spray. The perfume, if well designed, does of course possess the power to 'cover' unwanted odors, but in addition it can, by chemical and physical attraction, remove other volatile and unwanted odors. The polyhydric alcohols such as triethylene glycol and propylene glycol possess bactericidal properties which prevent the formation of malodorous decomposition products. In addition, the fine particles of polyhydric substances dissolve odorous bodies and bring them to the ground. If glycerin lacks bactericidal properties, it possesses the property of 'grounding' unwanted odors to a marked degree."

For air fresheners Mr. Pickthall advises about 2% glycerin, with about 10% of anhydrous ethyl or isopropyl alcohol as solvents. For an anti-frosting agent for spraying on windshields, he reports, a satisfactory formulation can be pressure packaged that uses about 5% glycerin.

The author predicts that glycerin will be considerably more important in aqueous emulsions than it has hitherto been. In shave creams, he reports, glycerin is the "most important single factor." "The amount to add will vary with the amount of soap employed and the ratio of stearate to laurate, but excellent results have been obtained when 20% glycerin has been used."

In hand creams and anti-sunburn creams, Mr. Pickthall reports, glycerin "is necessary to give stability to the foam and to provide ease of spread on the skin. If 1% methyl *para* dimethyl amino benzoate is included in the formula, then an excellent anti-sunburn preparation is provided. Further, the presence of dimethyl phthalate provides insect repellent properties."

Aerosol Data

(*From Page* 21)

havior in establishing contact with one another.

It should be taken as a matter of course that new techniques, methods, and products are being investigated and thoroughly tested (though not always without prejudice and certain reservations in favor of accepted, conventional techniques). It is not the experts of the aerosol industry who are conducting these investigations, but they are the ones who are being asked to answer the questions —either by their competitors or by experts holding the opposite view. For hygienic, sanitary, medical, or insecticidal products, examining experts will continue to be wary of giving their endorsements to some particular product without sufficient scientific data. In addition to the basic aerosol technique, this applies to the products used and to methods of application.

As a rule aerosol products consist of substances recently discovered or developed for specific purposes. This generalization applies particularly to

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deodorizers, bactericidal substances, insecticides and pesticides, and disinfectants, and pharmaceuticals. Substantial proof will be required to convince medical practitioners that a certain new aerosol disinfectant (for instance) would be just as effective as some commonly-used substance; or that certain new deodorizers, far from being merely masking agents, actually do destroy or chemically neutralize odorous vapors or particles. Principles of action as well as case histories will be required here.

It may be the case that scientific research on the nature and behavior of aerosols in certain fields is more advanced or widely discussed in Europe than in the U. S. Medical application of aerosols produced by a rather large variety of apparatuses with specially-developed products seems to have progressed in European countries to high standards in every respect. Commercial aerosol packages may be expected to eventually prove their effectiveness to a similar high degree, and just as eventually get the enthusiastic approval of the scientific experts. However, at present it can hardly be denied that the chief contributing factor toward the skepticism of these experts is the lack of a wide range of basic information about aerosols as packaged products.★

Consultants Corner

(*From Page* 37)

possible contamination before filling. Containers are used without sterilizing. Unsterilized valves are attached to the can by a vacuum crimper and the product is gassed with nitrogen from a tank whose connection lines are assumed to be clean, through a gassing head unknowingly contaminated with some product forced up into it during an accidental regassing attempt a few days previously. All this may take place in a nice spotless-looking tile and stainless steel room which is cleaned, apparently adequately, every day. Cans are cartoned and stored at normal warehouse temperatures. Naturally, some of these steps may not take place in any one given case, but all are possible sooner or later.

The above procedure would almost guarantee trouble if the gassing operation described *did not* take place. With it, contamination and spoilage is a foregone conclusion. The pressurizing does two things—it makes it highly desirable to remove the air before introducing an internal atmosphere of non-oxygenated gas under pressure and it can blow a whole cloud of bacteria from the surface of the can valve, the gassing head and gas lines into the interior of the can. This means that there then exist inside the container, conditions for anaerobic spoliage, with all the accompanying danger to the user implied in such a condition.

It is true that the picture painted here might not ever develop, but the surest way to see that it doesn't is to appreciate the dangers of food processing (and what constitutes good practice) every step of the way. There will be special problems as different products are developed, and no specific rules are possible which would cover all possibilities. Intelligent application of good food technology concepts will guarantee that no catastrophes will occur.★

Aerosols Overseas

(*From Page* 31)

sociation, has now issued its report. Until the recommendations have been acted upon by a full industry meeting scheduled for mid-April, no steps will be taken to incorporate into an association. However, in the meantime, a temporary office will be opened in Frankfort. It will be under the direction of F. H. Hans (Pegasus Corp. Frankfort representative) at Zeil 81, Frankfort/M., Germany.

This office will act in the organizing work and also as an information center until definitive arrangements are made at the general industry meeting in April. Until then, anyone desiring information about the planned organization, or who has a question on aerosols or their components, suppliers, etc., can have his questions answered at the above address.★

New Aerosol Patents

The data listed below is only a brief review of recent patents pertinent to the readers and subscribers of this publication.

Complete copies of these patents may be obtained by writing to the publisher of this magazine, Aerosol Publications, Box 31, Caldwell, N. J., and remitting 50c for each copy desired. For orders received outside of the United States the cost will be $1.00 per copy.

2,815,152. Dispensing Package and Method. Patent issued Dec. 3, 1957 to Lindley E. Mills, Kalamazoo, Mich.

An article of manufacture comprising a container, a product chamber and a propellant chamber inside the container separated from one another by a flexible diaphragm adapted to flex without elastic deformation to accommodate itself to variations in the volumes of the respective chambers, fluid-conducting means communicating with the product chamber, and a liquid propellant within the propellant chamber having a vapor pressure higher than the external pressure on the container, the diaphragm encircling the propellant entirely and being unattached to the wall of the container.

2,815,330. Generator of Powdered Aerosols. Patent issued Dec. 3, 1957 to Paul G. Andurs, Columbus, Ernest Paul Matthews, Alliance, and Eugene C. Ricker, Columbus, Ohio, assignors, by mesne assignments, to The Haloid Co., Rochester, N. Y., a corporation of New York.

A generator of an aerosol of powder particles for development of xerographic images comprising a gas tight housing, an input tube, an output tube having an internal opening within the housing and an external opening extending outside said housing, said input tube adapted to supply a flow of gas to said housing from a compressed gas source at a sufficient pressure to form an aerosol of powder particles at the internal opening of the output tube, said output tube adapted to feed an aerosol of powder particles from said housing, a porous tape of material adapted to hold powder particles, releasable to gas flow through said tape, positioned within said housing, and means within said housing to position a portion of the tape of material over the internal opening of the output tube, said input tube being positioned relative to said output tube to feed compressed gas into said housing and then through the portion of the tape material over the internal opening of the output tube and then out said output tube.

2,816,691. Spray Device Having a Flexible Sac Lining. Patent issued Dec. 10, 1957 to Lawrence T. Ward, Northampton County, Pa.

A hand portable finger operable aerosol bomb comprising a rigid cylindrical upright pressure resistant container having at least one continuously open aperture in the cylinder wall and having a top large circular mouth; a circular rolled-over flange integral with the container disposed about the container mouth, a conventional finger depressable spray valve assembly having a circular flange and a depending syphon tube disposed in said mouth of said container, said spray valve flange being rolled over said container flange in gas tight relationship; and a flexible sac having a circular mouth engaging said spray valve assembly in a gas tight manner whereby self-propellant liquid contents disposed within said flexible sac are dispensed through said syphon tube upon depressing the finger depressable plunger of said spray valve.

2,816,760. Feeding Mechanism for Labels and the Like. Patent issued Dec. 10, 1957 to Ariosto Seragnoli, Bologna, Italy.

Feeding mechanism for labels and the like, comprising a label magazine having projections at each end thereof to retain the ends of the flexible labels, the labels being free of support at the center to permit bending under the action of their weight; a pair of pick-up means rotatably mounted and linearly movable in a direction parallel to their rotation axis, said pick-up means provided with suction openings for pneumatically attaching the lowest label thereto at not less than two points; said pick-up means being movable towards each other, so as to make the attached label bend further and to separate it from the other labels by drawing its ends out from the projections; said pick-up means being rotatable with the attached label, and movable to the delivery point for release therefrom.

2,818,190. Label Applying Machine. Patent issued Dec. 31, 1957 to Philip C. Booty, Jr., Chicago, Ill., assignor to International Harvester Co., a corporation of New Jersey.

A label applying machine comprising a supporting structure, spindle means on one side of said supporting structure for receiving a roll of imprinted gummed tape of the pressure sensitive type, a label shearing mechanism on said supporting structure spaced from said spindle, said label shearing mechanism including a label die and a label shear, a spool on the other side of said supporting structure spaced from said label shearing mechanism, means driving said spool to move said imprinted gummed tape through said machine, means moving said label shear, means on said supporting structure to removably receive a package to be labeled, said means removably receiving a package comprising an arcuate ledge located be-

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neath said label shear, and contact means positioned closely adjacent said supporting structure and the inner edge of said arcuate ledge, means joining said contact means with said means moving said label shear, whereby when an arcuate shaped package is inserted fully onto said arcuate ledge the contact means is engaged to cause movement of said label shear and a subsequent cutting out of the label from the imprinted gummed tape and an application of the cut-out label to the outer arcuate surface of the package.

2,818,202. GLASS PACKAGE DISPENSER FOR AEROSOLS. Patent issued Dec. 31, 1957 to Robert H. Abplanalp, Bronx, N. Y., assignor, by direct and mesne assignments, of one-half to John J. Baessler, Yonkers, N. Y.

A dispenser for pressure packed materials comprising a plastic housing having a recess open at its bottom and closed at its top except for a central opening in its top wall, a resilient annulus seated against the under side of said top wall and coaxial therewith, said housing being provided internally near its open bottom with an annular channel, a plastic valve body provided with a bead sprung into the annular channel of the housing with the upper end of the body clamping the resilient annulus between the body and the top wall of the housing, a dip tube depending from the valve body, a plastic core positioned within the valve body and having a tubular stem extending upwardly through the central opening of the resilient annulus and terminating in a discharge button having an orifice, a port through the wall of the tubular stem between the upper and lower surfaces of the resilient annulus and normally sealed thereby, and a spring within the valve body bearing against the valve core to normally maintain said port in sealed position.

W. Alec Jordan
Chemical Business Counsel

- Marketing Analyses
- Product Development
- Evaluation of Purchasing Determinants

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British Aerosol Patent

Aerosol Foundation Cream

Brit. Pat. 780,885. Patents issued Aug. 7, 1957 to Innoxa (England) Ltd., London. Refers to a cosmetic coloured foundation cream suitable for packing under pressure in an aerosol dispenser. It consists of a pigment or pigmented powder in a cosmetically suitable base capable of being ejected from an aerosol dispenser in the form of a highly aerated cream. It also comprises an aqueous emulsion incorporating an emulsifying agent, an oil or fat, a preservative, a perfume and a propellant. The propellant may be a liquefied, normally gaseous, low molecular weight halogenated hydrocarbon propellant. Tinted foundation creams of the vanishing cream type can be manufactured by this method.

Trade Mark Applications

Applications for registration of the following trademarks were published in recent issues of the *Official Gazette* of the U. S. Patent Office. In not all cases are there strictly aerosol trademarks, however many of the products listed below come within the category of those for which a possible future use in aerosols is foreseen.

ACCOMPLICE, for perfume and toilet water. Filed May 1, 1956 by Coty, Inc., New York, claiming first use Oct. 21, 1954.

STRAPLESS, for colognes. Filed Feb. 4, 1957 by Gratia Barre, Inc., d.b.a. Gratia Barre, Minneapolis, which claims first use Aug. 10, 1956.

BEAUTINA, for a variety of cosmetic products, including perfumes, colognes and toilet waters, body deodorants, depilatories, hair tint, hair dressings, and shaving creams. Filed May 16, 1956 by Haering & Co. Odol-Fabrik, Kosmetische Produkte, Goldach, St. Gall, Switzerland.

SUN AND SKEETO, in slanted letters with script, for a preparation for preventing sunburn which aids in repelling insects and in tanning. Filed Feb. 14, 1957 by Valeria C. Pack, d.b.a. Western Pharmacal Co., Salt Lake City, Utah, which claims first use Jan. 19 of same year.

PRES N SPRAY, for aerosol spray bomb containing insecticides. Filed March 1, 1956, by Pres-N-Spray Corp., Chicago, Ill. claiming first use Dec. 3, 1954.

TNT, for insecticides, insect repellents, rodenticides and fungicides. Filed Feb. 6, 1957 by Turly Nolen Products, Inc., Miami, Florida, which claims first use Jan. 10, of last year.

STERIBULB, for cylinders containing, under pressure, a sterilant, the active ingredient of which is ethylene oxide. Filed May 7, 1957 by Ben Vue Laboratories, Inc., Bedford, Ohio, which claims first use April 18 of same year.

MANSFIELD, in upper and lower case letters, with shaft of "f" extended downwards. Filed Nov. 5, 1956 by Bourjois, Inc., New York, claiming first use on or about Feb. 14, 1936.

CHERRY SILVER, SUN SILVER, and CHERRY SILVER, for hair tinting, dyeing and coloring preparations. Filed Nov. 21, 1956 by Clairol Inc., Stamford, Conn., claiming first use Oct. 1 of same year.

FASHION TAN, for tanning lotion. Filed Dec. 19, 1956 by Aloe Creme Laboratories, Inc., Fort Lauderdale, Fla., with first use claimed June 7 of same year.

LADY VELVET, for hair creams in the nature of a pin curl, pressing, styling cream and the like; shampoos, and hair sprays. Filed May 2, 1957 by E. F. Young Jr., Mfg. Co., Meridian, Miss., claiming first use Feb. 1 of same year.

OH LA LA!, for perfume and cologne. Filed June 3, 1957 by Richard Hudnut, Morris Plains, N. J., with first use May 17, 1957.

SILIKLEEN, for eyeglass cleaner. Filed June 13, 1957 by Connecticut Chemical Research Corp., Bridgeport, claiming first use May 31 of last year.

LENZ-X, in script angled 30°, for eye glass cleaner. Filed July 24, 1956 by Leo C. Johnson, d.b.a. Leo C. Johnson Products, Pasadena, Calif. with first use claimed for May 2 of same year.

SILVER DOLLAR, for air deodorizer. Filed April 15, 1957 by Abbey Chemical Co., d.b.a. Abbey Chemco, Providence, R. I., which claims first use in or about October 1956.

LEAF-GLOW, for aerosol spray for shining plant leaves, wicker, and raffia. Filed March 7, 1956, by The Renard Co., New York, claiming first use Sept. 22 of previous year.

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Warner-Lamber List Changes

The Warner-Lambert Pharmaceutical Co., Morris Plains, N. J., last month announced the formation of a new division, called Family Products Division, to handle the marketing of Richard Hudnut-DuBarry, and a number of other product lines. To head the new division the company named J. S. Hewitt, who had been president of Anahist, another division of Warner-Lambert.

Other executives of the new division are Robert Urban, executive vice-president in charge of Hudnut-DuBarry; G. S. Fowler, vice-president for DuBarry, and I. W. Hoff, vice-president of all advertising.

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Lehn & Fink Names Goren

Emanuel Goren, formerly advertising-merchandising manager, has been named manager of the Lehn & Fink Division of Lehn & Fink Products Corp., New York. In his new post he will head overall administration of the division, including advertising, promotion, sales, and merchandising.

Acrolite Campaign

(*From Page 26*)

during the teaser campaign was the fact that our competitors were even more interested than our dealers. Our objective was to preserve our discovery until we were in a production position to supply all our dealers at the same time. We also wanted to establish Acrolite as the originator of an odorless artists' fixative. To protect the development even further, we made our patent application just after the development and before the formal introduction of the product in December."

"All these were contributing factors toward the decision to use 'the cloak and dagger' technique for the product's introduction. To preserve the secrecy of the whole campaign, we took stock of our entire production operation.

"Our top two chemists had been with the firm since its founding in 1952, so there was no reason at all to question their loyalty. But when one comes to label design, printing of dealer brochures, and working with an advertising agency, each of these was a potential (though often unintentional) information leak."

Mr. Pozak turned over the label and package design to Schnur-Appel, a nationally-known firm. For the printing of the dealer brochures, he gave the job to a local printer, an acquaintance of Acrolite's public relations director. Out of a mixture of affable amusement and love of intrigue, the printer agreed to turn out the labels personally in his shop at night. By the time the formal introduction time came, Mr. Poznak was fairly confident that no leaks had developed.

"At least I assume there were no leaks," he points out. "At any rate, to date I haven't yet seen an imitation of our product."★

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Research Unit to Conn.

Western Hemisphere Research, Inc., has been established as a corporation to conduct research activities in the U. S. for the Nestle group of companies. Its head office will be at Ridgeway Center Building in Stamford, Conn., and it will conduct research and development work at its laboratories in Marysville, Ohio, and Fulton, N. Y.

CLASSIFIED ADVERTISING

SITUATIONS WANTED

EXECUTIVE AEROSOL TECHNICIAN will take complete charge of your aerosol division. Have complete working knowledge of can, Peerless ½ oz. and 2 oz. containers, valves (regular and metered), propellants, formulation, research and development. Have experience in assigning personnel in sales and production. Write Box 151, c/o Aerosol Age.

CHEMIST-ENGINEER 7 years experience in pressurized packaging. Production operations, formulation development, package evaluation, and technical service in package components. Address Box 152, c/o Aerosol Age.

Rates for classified advertisements are ten cents per word, $2.00 minimum, except those of individuals seeking employment which *Aerosol Age* will run without charge. Check must accompany all classified advertisements. Address all replies to Classified Advertisements with Box Number, care of *Aerosol Age*, Box 31, Caldwell, N. J. Closing date: tenth of month preceding month of issue.

Velsicol Expands Sales Staff

B. Gene Carter joined Velsicol Chemical Corp., Chicago, sales staff in the Midwest during 1957 as technical sales representative. He received his B.S. in Entomology from Texas A. & M.

Mr. Carter is responsible for sales of Velsicol's insecticides and solvents in Ohio, Kentucky, Michigan, West Virginia, and the western portions of Pennsylvania and New York. He is headquartering at 3347 Kimberly Avenue, Columbus, Ohio.

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Perfumers Elect Bouillette

Pierre Bouillette, of Givaudan-Delawanna, Inc., has been named chairman of the American Society of Perfumers. The election, held early last month, saw Jacques Masson, Flam-Haft Laboratories, Inc., elected president and Oliver L. Marton, Shulton, Inc., vice-president. Other new officers are Harry Saunders, Givaudan-Delawanna, Inc., secretary; and Edwin D. Morgan, Jr., Lever Brothers, treasurer.

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OVER THE TRANSOM

AS is evidenced by our cover photograph this month, nitrogen as a propellant has already reached the "Big Time." Within months after first announcement of efficient aerosol valves and full development of industry knowledge on product compatibility, corrosion factors, etc., two major marketers are test merchandising tooth pastes and at least one aerosol food product is being marketed nationally.

With all this optimism spreading throughout the industry with a rapidity seldom evidenced for other aerosol developments, perhaps a note of caution should be introduced at this point.

It has been pointed out to several of our staff that nitrogen, though one of the most promising of all new propellants, definitely has limitations. We were told that the pressure factor is so acute in nitrogen packaging that any small leakage (even 4-5 per cent) from a single container will quickly inactivate the entire package. Also, we have been told that to prevent these leakages, the valve and other parts must fit so tightly that a child or woman may, on occasion, be unable to actuate it with normal finger-tip pressure. We hope these shortcomings, if they do exist, can be overcome before the deluge of nitrogen propelled products (a deluge that is bound to come) really hits the national market.

* * *

The CSMA is currently surveying its membership to find out whether the majority wishes to repeat the resort hotel experiment (begun this year at Hollywood Beach) for its 1960 convention. Among the objections registered at Florida were understandable reluctance of some individuals to remain away from their businesses for five or more days, and the more serious objection that it is more difficult to pin people down to business in a resort atmosphere.

Though both these objections have some validity, we'd like to go on the bandwagon for a repeat of the Florida experiment. We think a lot was accomplished, and the resort hotel atmosphere seemed to contribute much toward breaking down the formality that inevitably creeps into the proceedings at a non-resort hotel. Holding the convention at a resort hotel every two or three years is, all things considered, a good "change-of-pace," and deserves encouragement.

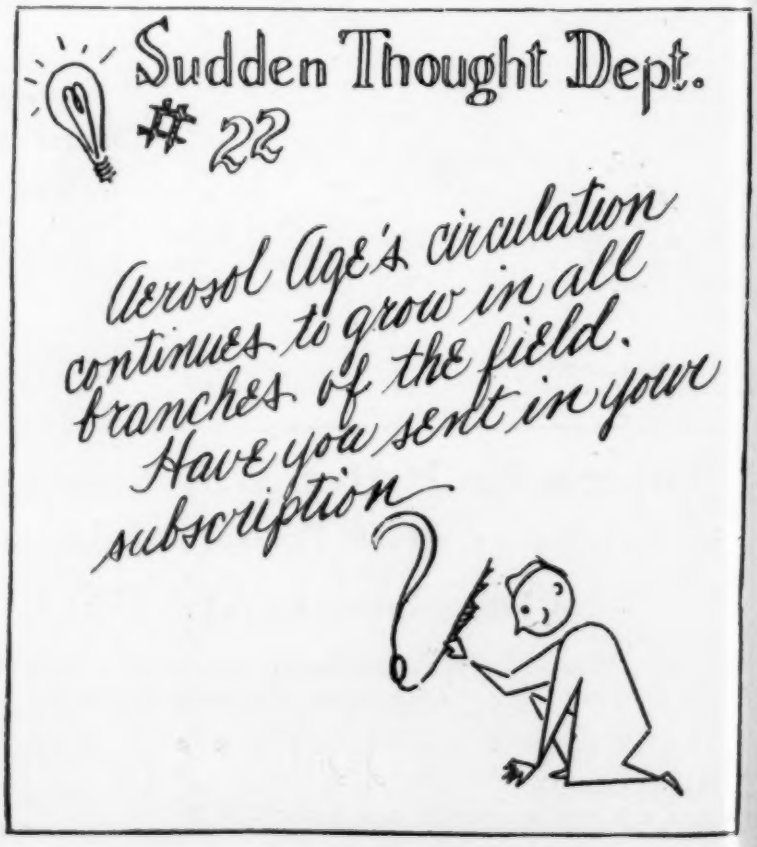
The FDA's ruling on methoxychlor for dairy cattle sprays (reported on page 46 of this issue) is, in the opinion of many, a trifle harsh. It had been felt by these authorities that a tolerance of 0.25 parts per million *would not* represent a hazard to health, and at the same time would permit use of the insecticide as a spray for flies. However, the government's policy that residues in milk should be kept to a barest minimum, as is reflected by this latest ruling, may create new problems when the question arises of establishment of tolerances on forage and feed crops consumed by dairy animals.

* * *

Authoritative word has arrived that the Fastex Division of Illinois Tool & Die, which had announced its intention of making a strong entry into the aerosol valve field early this year, is giving up its attempt even before going into production. Though the exact reasons haven't yet been officially announced, our source tells us the decision to forego entering the aerosol field was based on "economic considerations" and on difficulties in ironing out production problems.

* * *

Though we'd hate to be accused of jumping to conclusions, there seems to be growing interest in aerosols in fields not normally thought of as aerosol-minded. The aerosol came in for much informal discussion at both the Canners' and the Soap Association conventions, and pharmaceutical houses and drug trade publications seem to be keeping a weather eye on the aerosol market and its latest developments.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